

Deposition of David Arthur Swanson, Ph.D.

White v. State Board of Election Commissioners

October 5, 2023



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White v. State Board of Election Commissioners

David Arthur Swanson, Ph.D.

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IN THE UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF MISSISSIPPI
Greenville Division

DYAMONE WHITE, et al.,)	
)	
Plaintiffs,)	
)	
v.)	No. 4:22-cv-00062-SA-JMV
)	
STATE BOARD OF ELECTION)	
COMMISSIONERS, et al.,)	
)	
Defendants.)	

DEPOSITION UPON ORAL EXAMINATION
OF
DAVID ARTHUR SWANSON, Ph.D.

714 LAKEWAY DRIVE
BELLINGHAM, WASHINGTON

DATE TAKEN: October 5, 2023
REPORTED BY: Evelyn M. Adrean, RPR, CCR 22009424

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ALSO PRESENT;

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1 BELLINGHAM, WASHINGTON; OCTOBER 5, 2023

2 8:57 a.m.

3 DAVID ARTHUR SWANSON, Ph.D., witness herein,
4 having been first
5 duly sworn on oath,
6 was examined and
7 testified as follows:

8 E X A M I N A T I O N

9 BY MR. SAVITZKY:

10 Q. Good morning, Dr. Swanson.

11 A. Good morning.

12 Q. Good to see you today. So I introduced myself
13 already, but I'm Ari Savitzky. I'm an attorney for the
14 ACLU. I represent the plaintiffs in this matter. Do
15 you understand that?

16 A. Yes.

17 Q. And can you state your full name for the record
18 and spell it?

19 A. David Arthur Swanson, D-a-v-i-d, A-r-t-h-u-r,
20 S-w-a-n-s-o-n.

21 Q. All right. And I'll sort of briefly go over
22 some of the ground rules for deposition. The court
23 reporter just swore you in, you're going to be under
24 oath, means you're swearing to the truthfulness and
25 accuracy of your answers. Do you understand that?

A. Yes.

Q. And the oath that you just took has the same

1 effect as if you were testifying in court. Do you
2 understand that?

3 A. Yes.

4 Q. And as you can see, we have the court reporter
5 here, she's transcribing your answers. It's really
6 important to answer audibly so that your answers can be
7 recorded on the transcript. So no nodding or shaking
8 your head. Do you understand that?

9 A. I do.

10 Q. And I'm going to do my best to wait until
11 you're finished with an answer, and I would ask you to
12 sort of wait until I'm finished giving a question before
13 you start speaking. Does that sound fair?

14 A. It does.

15 Q. All right. I'm going to ask questions, your
16 job is to answer the question and you have to answer the
17 questions unless you're instructed not to answer them by
18 your attorney. Do you understand that?

19 A. I do.

20 Q. Okay. And it's important that we understand
21 each other. We're going to have a conversation, we're
22 going to talk about a lot of different topics. If you
23 don't understand a question, let me know, try to
24 rephrase it so we can understand each other. Does that
25 make sense?

1 A. Yes.

2 Q. Okay. And if you need to take a break at any
3 time, just let me know. The only thing I ask is, if
4 there's a question pending, if I've asked you a
5 question, let's finish the question before we take a
6 break. Okay?

7 A. Sounds good.

8 Q. And if you realize at any time you gave an
9 answer that wasn't accurate, wasn't complete, just let
10 me know so that we can get that corrected on the record.
11 Okay?

12 A. Will do.

13 Q. Any questions about any of the instructions
14 that I've given here?

15 A. No.

16 MR. WALLACE: Did we just have somebody else
17 chime in?

18 MS. JONES: Make sure they're on the record.

19 MR. SAVITZKY: I don't know. Do we want to
20 have everyone who's on the Zoom announce themselves for
21 the record at this point?

22 MR. YOUNGWOOD: Jonathan Youngwood with
23 Simpson Thacher & Bartlett.

24 MS. HOUGH: Hi, this is Alexandra Hough,
25 that's H-o-u-g-h, here on behalf of the plaintiffs.

1 MR. SAVITZKY: Anybody else on the Zoom who
2 we haven't registered yet?

3 THE REPORTER: I think I got the others.

4 MR. SAVITZKY: Okay.

5 BY MR. SAVITZKY:

6 Q. And Dr. Swanson, is there any reason that you
7 can't provide complete and accurate testimony here
8 today?

9 A. Not that I know of.

10 Q. Are you taking any medications or drugs that
11 might impact your ability to give complete and accurate
12 testimony?

13 A. I don't think so.

14 MR. SAVITZKY: All right. Let's start by
15 talking about your background. And actually before we
16 do that, even, I'm just going to mark as Exhibit 1 the
17 notice of deposition just so we have it in the record.
18 So I'll mark as Exhibit 1. This is just the notice of
19 deposition for today's deposition. I'll put it right
20 there if you'd like to examine it. There's a copy for
21 you as well.

22 MR. WALLACE: Is this a copy for me?

23 MR. SAVITZKY: This is a copy that you can
24 look at, but no need to ask any questions about it, I
25 just wanted to mark it in the record.

1 Now what I am going to mark as Exhibit 2 and
2 hand to you is a copy of the report that you submitted
3 January 2023. And this one is for you, and here's a
4 copy for you, Mr. Wallace.

5 MR. WALLACE: Now, that's stamped.
6 Ultimately, that goes with the court reporter; right?

7 MR. SAVITZKY: Correct, yes.

8 MR. WALLACE: Uh-huh.

9 MR. SAVITZKY: So the stamped is for the
10 court reporter.

11 BY MR. SAVITZKY:

12 Q. So just taking a look at that stamped copy that
13 I handed you, is that -- does that look like a copy of
14 your January 2023 report?

15 A. It does.

16 Q. And just looking at Appendix 6 which is on page
17 136 of this document, just confirm that that's your CV?

18 A. It is my CV that was current as of the time I
19 submitted this.

20 Q. Any updates that you want to make to your CV
21 while we're talking about it?

22 A. I think there are more publications I have and
23 there may be some other things, but I don't think it's
24 anything substantial.

25 Q. What's your current job?

1 A. My current job is, I'm retired from the
2 University of California Riverside, I have a .25 full
3 time equivalent faculty position with Portland State
4 University's population research center.

5 Q. And is that population research center in a
6 particular department or is it an independent center?

7 A. It's in the School of Urban Public Affairs, or
8 whatever the name is of the school right now.

9 Q. And your academic career, fair to say you're a
10 demographer?

11 A. Yes. Thank you.

12 Q. What is demography?

13 A. It's a study of populations, could be either
14 human or nonhuman, wildlife, insects.

15 Q. Do you study human demography or the demography
16 of other species?

17 A. Humans.

18 Q. And would you say that you are an applied
19 demographer? What kind of demography do you --

20 A. I have a broad range of interests, many people
21 call me applied, but I do academic work as well.

22 Q. And what type of analysis do you do as a
23 demographer? How do you analyze human populations?

24 A. I usually take on what the major focuses are
25 that demographers use, and one is on the size of a

1 population, second is on the geographic distribution of
2 the population, third is on the population composition,
3 fourth is on the components of population change for
4 building migration, mortality, and the fifth is on the
5 determinants and consequences of population change.

6 Q. Would it be fair to say that your research is
7 focused on the areas of social demography and population
8 health?

9 A. I'm probably more focused on methods other than
10 social demography and population health, but I've
11 covered those fields.

12 Q. Okay. Just one second. Have you ever held an
13 appointment in a political science department in any
14 institution?

15 A. No.

16 Q. And just looking we'll turn to page 147 of your
17 resumé -- or your CV, excuse me. That's where the list
18 of publications begins. Just let me know when you're
19 there.

20 A. I'm there.

21 Q. Just looking at this list of publications, fair
22 to say that most of them are about studying human
23 populations, population change, and forecasting?

24 A. That's fair. I do have a book that has just
25 been published today that's basically on population

1 health. It's called Socio-Demographic Perspectives on
2 the COVID-19 Pandemic. It's an edited book I did with
3 my colleague Rich Verdugo.

4 Q. Congratulations on the publication.

5 A. Thanks.

6 Q. And so that book is about social demography as
7 it relates to the COVID --

8 A. It would be more on health demography, but it
9 also covered methods, how to look at and estimate COVID
10 infections very early on when you don't have the ability
11 to use a real complex model with lots of data input
12 requirements.

13 Q. Okay. So let's talk about some of the tools
14 and methods that you use in your research. Well, why
15 don't you tell me about the tools and methods that you
16 use as a demographer?

17 A. I use most of the standard tools that
18 demographers use, so I'll use life tables, for example,
19 I'll do different modeling techniques, regression type
20 techniques, so that's where it spills over into the
21 statistical area largely and that is in common with a
22 lot of other social science fields, we use those kinds
23 of methods.

24 Q. Do you use software in your research?

25 A. I do.

1 Q. What kind of software tools do you typically
2 use?

3 A. The major one I use is called NCSS, it's an
4 acronym. It stands for Number Cruncher Statistical
5 System.

6 Q. How long have you been using NCSS?

7 A. Since about 1980, '82.

8 Q. Do you ever use SPSS?

9 A. Not for many years.

10 Q. You have used it in the past?

11 A. I have.

12 Q. Ever used Stata?

13 A. Never.

14 Q. Do you ever use the R programming language?

15 A. No.

16 Q. Do you use any other programming languages?

17 A. Visual Basic. I have a minor in math, computer
18 science, so I know how to program in languages that are
19 long gone like PL/1, Fortran. Visual Basic is probably
20 the most current one.

21 Q. How often does your work involve coding in
22 Visual Basic?

23 A. I've just been working on a project right now
24 that involves using some Visual Basic coding.

25 Q. Do you ever use any GI S programs?

1 A. I don't implement them, if that's what you're
2 asking. Yeah, I don't do shape files or I don't do GIS
3 work myself.

4 Q. You don't work with any geographical mapping
5 software?

6 A. No.

7 Q. Don't work with Maptitude?

8 A. No.

9 Q. Don't work with ArcGIS?

10 A. No.

11 Q. Do you use survey data in your research?

12 A. Yes, I have.

13 Q. What are some examples of the survey data that
14 you've used?

15 A. Well when I was at Pacific Lutheran University,
16 I ran a small institute, and we did annual surveys of
17 Pierce County, so I was responsible for going out and
18 contracting with a private vendor to actually conduct
19 the surveys and supervise them, put the questionnaires
20 together. When I worked on the Yucca Mountain high
21 -level nuclear waste repository, I was responsible for
22 surveys that were done of people that were in the impact
23 area, so --

24 Q. Sorry, go ahead. Finish your --

25 A. That's okay. Go ahead.

1 Q. Those are surveys that you conducted?

2 A. Yes.

3 Q. Do you ever work with survey data that has been
4 gathered by others?

5 A. I have.

6 Q. Do you ever work with ACS, American Community
7 Survey --

8 A. I do.

9 Q. -- data?

10 A. Wrote a book on that -- or a section of a book
11 for the ACS when that first started coming out, was part
12 of the pilot study programs for the ACS.

13 Q. Do you ever use voter rolls in your work?

14 A. Not until I started doing expert witness work.
15 Or looked at them, but I don't use them.

16 Q. You don't use voter rolls in your work?

17 A. No.

18 Q. And you said when you started doing expert
19 work --

20 A. Witness work in areas like redistricting, in
21 the case we're talking about now. I'm aware more of
22 voter rolls, but I haven't actually used it -- yeah,
23 there's actually one exception. I did a volunteer
24 survey for Kitsap County, Washington that was in regard
25 to some issue that was going to be on the ballot. And

1 the people I worked with that was probably now defunct,
2 the Kitsap County Sun, which is a newspaper, had access
3 to voting rolls. So we were calling people who
4 registered voters.

5 Q. And when did you conduct this Kitsap County,
6 Washington survey?

7 A. Early 1990s, late 1980s.

8 Q. And so other than that instance, you haven't
9 used voter rolls in your work?

10 A. That's correct.

11 Q. Ever use ecological inference analysis?

12 A. I have.

13 Q. Tell me about your use of ecological inference.

14 A. It's not the guaranteeing program, but I've
15 used ecological inferences in -- one of the publications
16 I have, actually. It's in the Journal Demography, and
17 it takes a state level regression method for estimating
18 life expectancy at birth and applies it to subcounty
19 areas. And that, in fact, would be ecological inference
20 because you went from a higher level of aggregation to
21 lower levels of aggregation. And the paper involved
22 doing a test of its accuracy.

23 Q. And you mentioned it's not Gary King's method?

24 A. That's correct.

25 Q. So it's not the R x C method?

1 A. That's correct.

2 Q. Is it a homogenous precinct type analysis that
3 you did?

4 A. It's a regression analysis. And people can use
5 multilevel regression analyses to do things that are
6 very similar to ecological analysis.

7 Q. And other than that -- and was that just one
8 example? Have you used ecological inference analyses in
9 other instances in your work?

10 A. There may be. That's one I can recall.

11 Q. And as you sit here, can you recall any others?

12 A. Not offhand.

13 Q. In your research, have you studied voting
14 behavior?

15 A. No.

16 Q. Have you published any scholarly work on voting
17 behavior?

18 A. No.

19 Q. Any scholarly work on voter turnout?

20 A. No.

21 Q. Have you published any political science
22 journals?

23 A. Not that I can think of. There might be some
24 journals with the term "political" in it, but I can't
25 recall for sure.

1 Q. And we'll talk about CES, Cooperative Election
2 Survey studies -- data later, but have you ever used
3 that CES study before this case?

4 A. No.

5 Q. Were you familiar with the CES before your
6 involvement in this case?

7 A. No.

8 Q. Have you ever drawn an electoral map before?

9 A. No.

10 Q. And I'm looking at pages 6 and 7 of your
11 report. I'll let you take a second to get there. This
12 is your --

13 A. This is the report of January you're talking
14 about again?

15 Q. Yes, correct. The one that's been marked, I
16 believe, as Exhibit 2. You sort of summarize here some
17 of the expert work and some of the other references in
18 your CV; is that right?

19 A. That's correct.

20 Q. And you say that you played an active role in
21 the development of redistricting, a manual for
22 practitioners, analysts, and citizens. Do I have that
23 right?

24 A. That's correct.

25 Q. What was the role that you played in the

1 development of that?

2 A. I reviewed the work that Peter Morrison and Tom
3 Bryan did, the authors of that book. I helped them with
4 some questions on how to do methods.

5 Q. And what parts of the -- of that work did you
6 review?

7 A. I can't remember. I -- basically the whole
8 book, but I concentrated especially on some of the
9 measurement issues.

10 Q. And you provided comments?

11 A. I did.

12 Q. You're not credited as an author of the book?

13 A. No.

14 Q. You're mentioned in the front matter and the
15 dedication and acknowledgments?

16 A. I believe that's true.

17 Q. That's not a peer-reviewed publication, is it?

18 A. Every book I've been associated with goes
19 through a review process that's set up by the publisher.
20 So in a sense, it's a peer-review process. They
21 internally will go out and ask reviewers. You know, I
22 served as a series editor of Applied Demography for
23 Springer Publications, and if we get a proposal, it goes
24 out to review to other people. So in a sense it's peer
25 reviewed, but not in the same manner that people think

1 of as academic journal peer reviews.

2 Q. So the redistricting title was not peer
3 reviewed in the same way as an academic journal?

4 A. No. But it's a Springer publication, I
5 believe, so it went through some sort of review process.

6 Q. And you're not aware of what their review
7 process was, if any, for this particular title?

8 A. I'm just aware that they are likely to have
9 sent it out for a review to at least one, probably two,
10 other people to look at it before they even accepted the
11 proposal, and they may have done it sometime during the
12 whole process where they're putting it together. You'd
13 have to ask the editors at -- the people in charge of it
14 at Springer, for example.

15 Q. But you don't know, that's your assumption?

16 A. Well it's more than an assumption because I can
17 see some of the paperwork that flows back and forth. So
18 I know they're reviewing it, but exactly the details, I
19 don't know.

20 Q. You saw the paperwork for -- with respect to
21 this redistricting title?

22 A. I think I did. I see it for almost every time
23 that's ever come through my hands when I do it for
24 Springer, so I'm guessing that's the case.

25 Q. So let's talk about your prior expert work, and

1 we can stay looking at pages 7 and 8 of your January
2 report Exhibit 2 where you list some of that work. It's
3 also, I think, on page 187 of your CV, but this synopsis
4 that you have here will do just fine.

5 Looking at some of the on-the-stand
6 testimony that you list, these mostly involved instances
7 where you testified about population forecasting; is
8 that right?

9 A. Some -- one, two, three, at least three of them
10 did.

11 Q. I see a case about water rights in Arizona,
12 life expectancy, patient populations. None of the cases
13 you list here are voting rights or voting-related cases;
14 right?

15 A. That's correct.

16 Q. You never testified in a voting rights case
17 before?

18 A. That's correct.

19 Q. And do you know whether the court in the cases
20 or the courts, I should say, in the cases that you
21 testified in previously credited your testimony?

22 A. What does "credited" mean?

23 Q. Do you know whether they viewed it favorably,
24 they relied on it in coming to their decision?

25 A. Well, I was sworn in as an expert witness in

1 the case where I did testify, so I assume they used it
2 in some manner.

3 Q. You don't know which manner they used it in?

4 A. No.

5 Q. Okay. And looking at some of these cases that
6 you have listed here, you indicate there's some cases
7 where you produced -- and actually, let's look at page 8
8 where you say: "I produced expert reports as a
9 consultant of potential expert witness in other court
10 cases." You have a list of those here on page 8. None
11 of these are voting-related cases?

12 A. That's correct.

13 Q. And you never submitted a report in any
14 voting-related case?

15 A. That's correct.

16 Q. And then on page 8, paragraph 9 you say you
17 served as a consultant to Bryan GeoDemographics, BGD, in
18 regard to certain redistricting cases. Do I have that
19 right?

20 A. You do.

21 Q. What is Bryan GeoDemographics?

22 A. It's a company owned and operated by Tom Bryan.
23 He calls it a boutique consulting company based near
24 Richmond or in Richmond, Virginia.

25 Q. What is your role as a consultant for Bryan

1 GeoDemographics?

2 A. It varies. He -- when Tom Bryan contacts me,
3 it's usually about questions about a method.

4 Q. What kind of questions would he contact you
5 with?

6 A. I'd have to look up to remember them all, but
7 typically involve methods, statistical and otherwise,
8 sometimes demographic measures, sometimes summary-type
9 measures.

10 Q. What's an example?

11 A. I'd have to think about one off the top of my
12 head. I believe I've worked with him on doing some
13 statistical things. And they may have -- occur in the
14 book that he and Peter did too. But I haven't thought
15 about in a while, so off the top of my head I can't
16 remember what they were.

17 Q. And you said you've been working as a
18 consultant with Bryan GeoDemographics since about 2021?

19 A. Give or take that's correct.

20 Q. And you mentioned four cases here in paragraph
21 9 for which you serve as a consultant to Bryan
22 GeoDemographics, two of them are Caster versus Merrill
23 and Singleton versus Morrill; is that right?

24 A. Yes. Whatever's listed. And I don't remember
25 the cases. I know they're -- I just put them down in my

1 vitae once I send reports to Tom and he told me what the
2 cases were.

3 Q. And do you know that those are cases involving
4 Alabama's congressional districting from the 2020 cycle?

5 A. Not offhand I wouldn't.

6 Q. What did you do as a consultant in those cases?

7 A. Generally, Tom would ask me questions about a
8 method, and I would respond to them and try and give him
9 advice.

10 Q. Did you conduct any analysis of Alabama's black
11 belt as part of your consulting on those cases?

12 A. No.

13 Q. Did you conduct any analysis on the gulf coast
14 area of Alabama as part of your analysis in those cases?

15 A. Not in those cases, but I've done work on --
16 with an attorney in Texas that looked at the effects of
17 the oil spill where we looked at all the gulf coast, and
18 part of that involved gulf coast populations, but it
19 wasn't a voting rights case.

20 Q. And you -- do you draw any electoral maps or
21 review any electoral maps in your consulting in the
22 Caster and Singleton case?

23 A. Not that I recall. I certainly didn't draw
24 any. Usually the questions that Tom asks me are about
25 is this an appropriate statistical method to use in this

1 test? If it's a t-test, for example, should I use the
2 equal variance assumption or the unequal variance
3 assumption? If I use regression after I've transformed
4 variables, what would I do? So those are the types of
5 questions I typically help with him.

6 Q. And so, for example, he would take the analysis
7 that he'd done, take it to you and say, does this
8 methodology look right to you?

9 A. Sometimes they're even in advance of that.
10 He'd ask me what kind of advice would you give me on
11 some technique to use. And I stress I'm probably not
12 the only one he's asking for advice.

13 Q. And you know that Mr. Bryan and Bryan
14 GeoDemographics were working to defend the electoral
15 maps that were challenged in those Alabama cases?

16 A. That I do know.

17 Q. And do you know how the Court decided those
18 cases?

19 A. No.

20 Q. Do you know whether the Court determined that
21 the congressional districts in Alabama -- or the
22 challenged congressional districts in Alabama was likely
23 unlawful?

24 A. No. I don't follow the court cases.

25 Q. Do you know whether the Court in those cases

1 credited the analysis and testimony that Bryan provided?

2 A. I don't know.

3 MR. SAVITZKY: And I just want to mark
4 now -- what exhibit are we on?

5 MS. JONES: 3.

6 MR. SAVITZKY: Just going to mark as Exhibit
7 3, this is the Singleton case. And I'll hand this copy
8 to you and this copy to you, Mr. Wallace.

9 MR. WALLACE: Very good.

10 MR. SAVITZKY: And take a peek over my copy.

11 BY MR. SAVITZKY:

12 Q. And you can turn to page -- excuse me. Let's
13 turn to page 1007. The pages are marked in the top
14 right corner. And just let me know when you're there.

15 A. I'm there.

16 Q. And just looking at that first -- it's right in
17 the top left, the Court says: "We're concerned about
18 numerous other instances in which Mr. Bryan offered an
19 opinion without a sufficient basis or in some instances
20 any basis." Did I read that accurately?

21 A. Yes.

22 Q. And the Court lists various instances. And
23 then looking at that time the next page, page 1008, the
24 last sentence of the first full paragraph, the Court
25 says that: "Mr. Bryan overstated his opinions, offered

1 testimony without a sufficient basis, cited material
2 that he had not reviewed, offered opinions at the
3 preliminary injunction hearing that he had not offered
4 in his reports." Is that --

5 MR. WALLACE: Go ahead and read the whole
6 sentence instead of paraphrasing from the middle.
7 That's a form objection.

8 MR. SAVITZKY: That's fine. We can do that.
9 BY MR. SAVITZKY:

10 Q. The Court said in that last sentence:
11 "Although the schedule might have limited Mr. Bryan's
12 ability to perform some work that he otherwise might
13 have performed, it did not cause him to overstate his
14 opinions, offer testimony without a sufficient basis,
15 cite material that he had not reviewed, or offer
16 opinions at the preliminary injunction hearing that he
17 had not offered in his reports." Did I read that
18 accurately?

19 A. You did.

20 Q. And then looking at the last sentence in the
21 last paragraph, last full paragraph, I should say, on
22 that same page, the Court says: "Because Mr. Bryan
23 consistently had difficulty defending both his methods
24 and his conclusions and repeatedly offered opinions
25 without a sufficient basis and because we observed

1 internal inconsistencies in his testimony on important
2 issues, we find that his testimony is unreliable." Did
3 I read that right?

4 A. You did.

5 MR. SAVITZKY: And just for completeness,
6 I'm also going to mark as Exhibit 4 the Caster case.
7 And here is your copy. And Mr. Wallace there's a copy
8 for you.

9 BY MR. SAVITZKY:

10 Q. And just looking at the Caster case we can turn
11 to pages 52 and 53 of the document. And we don't have
12 to reread it all, but I just want you to confirm for me
13 that --

14 MR. WALLACE: Can I stop you and ask: I'm
15 trying to find the pagination here. You've got these --
16 are you looking at the asterisks, the --

17 MR. SAVITZKY: No. The pagination is right
18 at the bottom of the page.

19 MR. WALLACE: Oh, I see where we are. Okay.
20 Give me those numbers again, please?

21 MR. SAVITZKY: It's just starting at
22 page 52.

23 MR. WALLACE: Okay.

24 BY MR. SAVITZKY:

25 Q. And I just want to confirm that this is

1 verbatim the same statements are in the Caster opinion
2 as well. So starting in the first full paragraph in the
3 seconds column on page 52: "We're concerned about
4 numerous other instances in which
5 Mr. Bryan offered an opinion about a sufficient basis or
6 in some instances any basis." Same statement?

7 A. Where are you reading?

8 Q. On page 52, last part of the first full
9 paragraph.

10 A. That would be paragraph 60?

11 Q. No. Just on the second column, the first full
12 paragraph of the second column on page 52.

13 A. The one that starts out "separate"?

14 Q. Correct. And the last -- after the citation
15 there: "We are concerned about numerous instances in
16 which Mr. Bryan offered an opinion without a sufficient
17 basis or in some instances any basis."

18 A. I see that. I do.

19 Q. Okay. And then moving to the next page,
20 page 53, same statement that we read from the Singleton
21 opinion, this is in the second to the last paragraph in
22 the first column. "Although the schedule might have
23 limited Mr. Bryan's ability to perform some work that he
24 otherwise might have performed, it did not cause him to
25 overstate his opinion, offer testimony without a

1 sufficient basis, cite material that he had not
2 reviewed, or offer opinions at the preliminary
3 injunction hearing that he had not offered in his
4 reports." Same statement as before; and that's right?

5 A. That is.

6 Q. Okay. And then just looking at the next page,
7 page 54, last sentence of the first paragraph there,
8 again same conclusion: Mr. Bryan consistently had
9 difficulty defending his methods and his conclusions,
10 repeatedly offered opinions without a sufficient basis,
11 and concluding that his testimony is unreliable; right?

12 A. I read that.

13 Q. Okay. So let me ask you another question: Do
14 you know whether the supreme court ended up ruling in an
15 appeal in the Singleton and Caster cases?

16 A. I do not.

17 Q. Do you know whether William Cooper, plaintiff's
18 mapping expert in this case, the White case, drew any of
19 the plaintiff's illustrative maps in the Alabama cases?

20 A. I don't recall. I don't know.

21 Q. Do you recall conducting any analysis in
22 Mr. Cooper's maps in the Alabama cases?

23 A. No.

24 Q. Would you dispute that a panel of three medical
25 judges in the Singleton case found that the plans that

1 Mr. Cooper drew in Alabama were consistent with
2 traditional districting principles?

3 A. I'm not in a position to dispute or not dispute
4 it.

5 Q. And we can just look back at Exhibit 4, which
6 you should still have in front of you -- excuse me,
7 Exhibit 3 in the Singleton case here. And I just want
8 to look at page 1016 this time. Excuse me, 1015.

9 MR. WALLACE: 15?

10 MR. SAVITZKY: Sorry, 16.

11 MR. WALLACE: 16.

12 MR. SAVITZKY: Strike that. That's all
13 right. We don't have to do that.

14 BY MR. SAVITZKY

15 Q. And you said you didn't know whether the
16 supreme court reviewed these decision?

17 A. I believe -- I knew that it went to the supreme
18 court, but I just don't follow whatever they did with
19 it. And I may have heard from Tom about it, but that
20 didn't stick in my head.

21 MR. SAVITZKY: And we can now mark as 5,
22 this is the supreme court's decision reviewing those
23 Alabama -- Alabama decisions. Copy for Mr. Wallace.
24 I'm looking at page 15 on the bottom of this document,
25 second column, first full paragraph. Let me know when

1 you're there.

2 MR. WALLACE: All right. This is page 15 of
3 Westlaw print-off and it's somewhere.

4 MR. SAVITZKY: Second column.

5 MR. WALLACE: Okay.

6 BY MR. SAVITZKY:

7 Q. So first of all just in the first full sentence
8 in that second column, that Caster plans to rely on
9 illustrative maps produced by expert Bill Cooper. Do I
10 have that right?

11 A. Are you asking me?

12 Q. Yes.

13 A. Yes, that's what it says.

14 Q. And then looking at that next paragraph, says:
15 "The District Court agreed, found Cooper's testimony
16 highly credible commended Cooper for working hard to
17 give equal weight to all traditional districting
18 criteria." Do I have that right?

19 A. That's what I read.

20 Q. And then the last -- and actually, we'll
21 continue on. The next sentence: "The Court also
22 explained that Alabama's evidence of racial predominance
23 in Cooper's maps was exceedingly thin. Alabama's expert
24 Thomas Bryan testified he never reviewed the exhibits to
25 Mr. Cooper's report and never reviewed one of the

1 illustrative plans that Cooper submitted." That's
2 right?

3 A. It is.

4 Q. And just skipping a sentence going to: "By his
5 own admission, Bryan's analysis of any race predominance
6 in Cooper's maps was pretty light. District court did
7 not err in finding that race did not predominate in
8 Cooper's maps in light of the evidence before it."
9 Right?

10 A. That's what I read, too.

11 Q. So you also mentioned -- and we can put those
12 aside for now, maybe put them over here if we're not
13 using them. We'll want to hang onto this.

14 And in fact, just referring back to it,
15 page 8 of your report, you also mention that you worked
16 on the Ardoin case, Robinson v. Ardoin? That's the
17 Louisiana congressional districting case? I'm looking
18 at page 8 of your report.

19 A. Yes.

20 Q. Okay. And what did you do as a consultant for
21 Bryan GeoDemographics in that case?

22 A. I'd have to look back at my records and see
23 what I did, if I have e-mail correspondence. Again,
24 most of these where I would serve as a consultant to
25 him, he'd either contact me via e-mail or call me and

1 ask me questions about particular methods or ask me for
2 advice on these or something. And I don't recall
3 specifically what it was.

4 Q. Do you recall how actively involved you were in
5 consulting on the Ardoin case for Bryan GeoDemographics?

6 A. No.

7 Q. Do you recall whether you worked on a
8 misallocation analysis?

9 A. That sounds familiar. I think I did.

10 Q. And to be clear, you didn't draw any electoral
11 maps in that case?

12 A. I did not.

13 Q. Would you say that the analysis in that case
14 from Mr. Bryan reflects your input in your analysis?

15 A. It may reflect some of my advice that I give to
16 him about misallocation error or how to measure it?

17 Q. And by the way, for those Alabama cases, Caster
18 and Singleton, would you say that Mr. Bryan's analysis
19 reflects your input in your analysis as well?

20 A. I don't know.

21 Q. And you know that Thomas Bryan and Bryan
22 GeoDemographics were working to defend the congressional
23 districts that were challenged on behalf of the State of
24 Louisiana in that case?

25 A. Yes.

1 Q. Did you review the Court's decision in the
2 Ardoin case?

3 A. No.

4 Q. Do you know whether the Court determined that
5 the challenged congressional district there likely
6 violated the Voting Rights Act?

7 A. No.

8 Q. And this is the last one of these, I swear.
9 I'm not going to take that back rather than swear to
10 anything. I'm just going to mark a copy of the Ardoin
11 case. I think we're on Exhibit 6. And --

12 MR. WALLACE: I'm missing the first page of
13 it. I'm sure I can get it someplace else, but --

14 MR. SAVITZKY: Happy to.

15 MR. WALLACE: Did you miss a page?

16 MR. SAVITZKY: Here, I'll give you my first
17 page. I may have missed one.

18 BY MR. SAVITZKY:

19 Q. So would you dispute that the federal judge in
20 the Ardoin case agreed with the plaintiffs and held that
21 the challenged congressional districts there violated
22 the -- likely violated the Voting Rights Act?

23 A. I don't know what decision the judge made, so
24 I'm not in a position to dispute it or not dispute it.

25 Q. Do you know whether the Court credited the

1 analysis that Thomas Bryan and Bryan GeoDemographics
2 provided?

3 A. I don't know.

4 Q. And looking at what's been marked as Exhibit 6,
5 and turning to page 824, and we can start just in that
6 first full paragraph. Let me know when you're there.
7 First full sentence: "After observing Bryan on the
8 stand in this case, the Court finds his demeanor was not
9 so problematic as to disqualify him. But the Court
10 found his methodology to be poorly supported, his
11 conclusions carried little, if any, probative value on
12 the question of racial predominance." Did I read that
13 right?

14 A. You did.

15 Q. Okay. And then in the next paragraph, the
16 Court discusses how Bryan opined that race was a
17 prevailing factor in the design of plaintiff's
18 illustrative plans based on his "index of misallocation"
19 which purports to flag areas where a disproportionate
20 share of the black population was grouped into a
21 majority, minority district."

22 Is that the misallocation analysis that we
23 were talking about before?

24 A. Yeah, I'm sure what I helped him with was in
25 regard to how do you measure misallocation.

1 Q. Okay. And then looking at the next paragraph,
2 the Court says: "Even if this misallocation method is
3 accepted, the factual assumptions upon which his
4 conclusions rest are absent in this case. Hence,
5 Bryan's conclusions are unsupported by the facts and
6 data in this case and thus wholly unreliable." Did I
7 read that right?

8 A. You did.

9 Q. And then moving to the next column, first full
10 paragraph, concluding, the Court says: "Finally, the
11 Court finds that Bryan's analysis lacks rigor and
12 thoroughness which further undermines the reliability of
13 his opinions." Do I have that right?

14 A. You do.

15 Q. And in the last sentence: "For the foregoing
16 reasons, the Court gives very little weight to Bryan's
17 analysis and conclusions." Is that right?

18 A. It is.

19 Q. Okay. Now, the last case you mentioned -- and
20 we can put that one away as well. Put it right here.
21 Thank you.

22 So the last case is McConchie versus the
23 State Board of Elections that you listed. Is that an
24 Illinois redistricting case?

25 A. I think that was Illinois.

1 Q. Do you know what the legal issue is in that
2 case?

3 A. No.

4 Q. Do you know whether it involved the Voting
5 Rights Act or racial votes dilution?

6 A. I don't.

7 Q. Do you remember anything about what the case
8 was about?

9 A. No. Seriously, I don't.

10 Q. Do you remember anything about the analysis
11 that you did for Mr. Bryan?

12 A. I'd have to look back at my records and see
13 what questions he asked me.

14 Q. So as I understand it, the issue in that case
15 is whether it violated the federal constitution for
16 Illinois to use ACS population estimates to draw their
17 legislative districts rather than waiting for the 2020
18 census to come out. Does that sound right to you?

19 A. It does sound familiar.

20 Q. And the issue was that because ACS estimates
21 are estimates and not full measures of the population as
22 with the census, that was a one person, one vote
23 problem, it couldn't be sure that you had one person,
24 one vote allocation for population across the districts.
25 Does that sound right?

1 A. I don't know how people viewed a sample based
2 estimate compared to the census and how they used it.
3 That part I don't know.

4 Q. But based on what you recall, it wasn't a case
5 about racial vote dilution or racial representation?

6 A. I don't recall.

7 Q. So in the three cases where -- well, let me
8 strike that.

9 You do understand that the Caster and the
10 Singleton and Robinson cases are about racial vote
11 dilution?

12 A. I believe that's the case.

13 Q. So in the three cases where you consulted for
14 Bryan GeoDemographics that you know involved racial vote
15 dilution, in each one of those cases the Court did not
16 credit the Bryan GeoDemographics analysis; right?

17 A. That's what appears to be the case based on
18 what you read.

19 Q. Now, in your January report looking on to
20 page 10 -- you have it if you want to look at it -- you
21 say: "Because of its expertise and experience, I have
22 used the services of Bryan GeoDemographics which under
23 my direction has assembled data, maps, and other work
24 product." So you use Bryan GeoDemographics to assemble
25 data, maps, and work product for your report in this

1 case?

2 A. I'm sorry, where are you at?

3 Q. Oh, I'm sorry. Paragraph 10 on page 8. That's
4 my -- my mistake. Just the next paragraph from what we
5 were talking about: "Because of its experience and
6 expertise, I've used the services of Bryan
7 GeoDemographics to assemble data, maps, and other work
8 product." For this case for your report in this case,
9 yes?

10 A. Yes.

11 Q. And just looking -- I mean, I looked at the
12 maps in your report, they tend to have produced by Bryan
13 GeoDemographics legends or notes at the bottom; is that
14 right?

15 A. That's correct.

16 Q. So who actually created those maps and other
17 tables that are indicated as being produced by Bryan
18 GeoDemographics in your report?

19 A. They were -- they were done under a request
20 from me to -- I would -- could use a table or a graph or
21 something like this to put together in my report.

22 Q. And then Thomas Bryan created them?

23 A. Yes.

24 Q. And what information did you give him to
25 instruct him to create the report?

1 A. I gave him a general picture of what I wanted
2 to see in a table or a graph, and then he produced it
3 using probably the Public Law 94171 data or whatever
4 else was involved in it.

5 Q. Do you know what software he used to create --

6 A. Maps.

7 Q. To create the maps, yeah.

8 A. I think he uses map -- or the -- what's the
9 company in Redlands, California -- Arcinfo. I believe
10 that's what he used I'm pretty sure he uses things from
11 that group.

12 Q. Do you know what software he used to create any
13 data tables that he created for you for these purposes?

14 A. He usually uses Excel.

15 Q. Is this work that you could have done yourself?

16 A. Most of it involves really large files, and
17 he's adept at bashing around data and big files and
18 using parts of Excel that I don't use routinely like
19 pivot tables. So I probably could have done it but it
20 would have been a learning curve for me to get to that
21 point and also assemble all the data and have it
22 together. So it was much easier to work through Tom.

23 Q. Did he also provide substantive comments or
24 analysis on the types of analysis that you were doing
25 for your report?

1 A. No.

2 Q. Do you know whether any of the methods that you
3 used are the same methods that he used in the Louisiana
4 or Alabama cases?

5 A. I'd have to look at the reports to see.

6 Q. Could any of the reports -- analyses that
7 you've done be characterized as a misallocation analysis
8 similar to what Mr. Bryan did in Louisiana?

9 A. I can't recall using a misallocation index.

10 Q. Did Bryan GeoDemographics run the compactness
11 analyses that you use in your report?

12 A. He produced the Excel tables that produced
13 numbers for that.

14 Q. And did he actually produce the compactness
15 scores that you used?

16 A. The scores, yeah. He's got that, I think,
17 written up in various ways so he can produce them pretty
18 quickly.

19 Q. Looking back at your resumé, and I'm to turn to
20 page 159 of your report. Just a couple more items. I
21 don't want to -- it's a long resumé, I know. On page
22 158 you list some non-refereed articles. And one of
23 them is an internet article from around the time of the
24 2020 election called: Is Being Republican a Risk to
25 One's Health and the Health of Others? Do you see that?

1 A. I do.

2 MR. SAVITZKY: And I'm just going to mark a
3 copy of that as Exhibit 7.

4 MR. WALLACE: This on page 159?

5 MR. SAVITZKY: Correct.

6 MR. WALLACE: Okay.

7 MR. SAVITZKY: Let me just confirm that for
8 you. Oh, you know what, it's on page 160, third one
9 from the bottom. It's a long list of non-refereed
10 articles that we have here. And we're marking this
11 article as Exhibit 7.

12 BY MR. SAVITZKY:

13 Q. And in this article, you looked at heavily
14 Democrat and Republican counties and you compared per
15 capita case rate of COVID?

16 A. They were counties that had voted one way or
17 another in the presidential election.

18 Q. And your finding was that: Per capita, the
19 cases of COVID in areas that voted heavily Republican
20 were higher and they were increasing even though they
21 were sort of more sparsely populated?

22 A. That's correct.

23 Q. And you concluded that this finding: "Supports
24 the view that residents of those areas are ill disposed
25 to outside mandates to self isolate, practice social

1 distancing, and wear masks possibly due to
2 misinformation they consumed from conservative media
3 outlets."

4 A. Yes.

5 Q. And you concluded: "Our take is that political
6 orientations should be considered along with other
7 factors likely to generate COVID-19 cases. So along
8 with testing and its accuracy, data suppression,
9 potential superspreader venues, population density,
10 rates of interaction, age, race, and ethnicity and
11 gender, we believe that being Republican or being in
12 proximity to them could be a very real risk factor."

13 A. That's correct.

14 Q. And you still agree that being a Republican
15 could be considered a risk to your own health and that
16 of others with respect to COVID?

17 A. It was at that point in time. Whether is it
18 now, I'd have to go back and research it again. But it
19 definitely appeared to be the case when we did that
20 research.

21 Q. Okay. And just one other article, one of these
22 non-refereed articles, and we'll mark that as Exhibit 8.
23 This is an article from a publication called Zócalo
24 entitled: Is Hawaii a Racial Paradise. Do you recall
25 this article?

1 A. I do.

2 Q. This is, I think, a forum -- sort of internet
3 forum set of articles. And your article's on page 5 of
4 this document, if you want to turn to it. And it's
5 specifically entitled: "Compare Hawaii and
6 Mississippi." Do I have that right?

7 A. It is.

8 Q. And in your article, you note that Hawaii has a
9 very high proportion of people who identified as
10 multiracial, where as Mississippi has a lowest
11 proportion of people who identify as multiracial; is
12 that right?

13 A. That is.

14 Q. And you note that Hawaii has the highest life
15 expectancy, and Mississippi has one of the lowest or the
16 lowest?

17 A. That's correct.

18 Q. And you note that Mississippi is well below the
19 U.S. average in terms of people with bachelor's degrees?

20 A. Yes.

21 Q. And you note that Hawaii has less poverty than
22 the national average and Mississippi has significantly
23 higher levels of poverty?

24 A. Yes. And I'd say that that was as of the date
25 I did the article, so things may have changed. But

1 you're reading this correctly for the dates that I had
2 the data.

3 Q. You don't have any reason to think that that's
4 changed since this article was published?

5 A. I don't know.

6 Q. You don't have any to reason to think that it's
7 changed?

8 A. I haven't looked at the question since then, so
9 I don't know.

10 Q. And you ask -- and this is in this last
11 paragraph -- "What is it about these two states that
12 relates the number of multiracial people and health,
13 education, and income levels?" Right?

14 A. I do.

15 Q. And you say: "Historically, both states were
16 dominated by a small social economic elite, primarily
17 made up of white plantation owners. But in Hawaii, this
18 domination occurred in the late 19th century whereas in
19 Mississippi, it was already part of the political fabric
20 when the territory was admitted to statehood in 1817."
21 Right?

22 A. That's correct.

23 Q. And you continue: "Racism and labor
24 exploitation existed in Hawaii but they were neither as
25 extreme nor as embedded as they were in Mississippi

1 where slavery preceded anti-miscegenation pro laws."

2 Right?

3 A. Correct.

4 Q. And you still agree that the embedded history
5 of extreme racism and exploitation contribute to
6 socioeconomic deficits that we see in Mississippi today?

7 A. Yes.

8 Q. And we can put this one away as well. That
9 one, too. Thanks very much.

10 So let's talk about this case. You
11 understand that this deposition relates to litigation
12 brought under Section 2 the of Voting Rights Act?

13 A. I don't know what section of the Voting Rights
14 Acts it is, but I understand it's a case about voting
15 rights.

16 Q. Okay. When did you first learn about this
17 case?

18 A. A year ago.

19 Q. How did you learn about it?

20 A. Mr. Wallace contacted me.

21 Q. Did you and Mr. Wallace know each other
22 previously?

23 A. No.

24 Q. Just curious. What is your understanding of
25 the claims brought by the plaintiffs in this case?

1 A. You'd have to be more specific about what it is
2 you're asking me, because I don't follow the question
3 exactly.

4 Q. What do you understand the plaintiffs to be
5 challenging about the Mississippi Supreme Court?

6 A. What they seem to be challenging is the
7 counties that are within district 1 specifically.

8 Q. What is your understanding about why the
9 plaintiffs would like district 1 to be configured
10 differently?

11 A. I believe -- are you asking me specifically
12 about Dr. Burch's report?

13 Q. I'm asking generally about the claims in the
14 case. I mean, you reviewed Dr. Campbell's report;
15 right?

16 A. Yes. I spent more time with Dr. Burch's
17 report.

18 Q. You reviewed Dr. Cooper's report?

19 A. I did.

20 Q. Excuse me. Mr. Cooper's report?

21 A. Yeah, Mr. Cooper.

22 Q. Wouldn't want to unnecessarily promote
23 Mr. Cooper.

24 Having read a few reports in the case -- and
25 did you read the complaint that was filed in this case

1 by the plaintiffs?

2 A. Probably, but I don't recall.

3 Q. So I'm just asking you: What's your
4 understanding of why the plaintiffs think that
5 district 1 should be redrawn?

6 A. I think it's because they -- the idea is that
7 there should be a -- either a higher majority or a
8 straight-out majority of black voters in the district.

9 Q. And what is your understanding of why
10 plaintiffs think that district should be redrawn so that
11 there's a higher majority or a straight-out majority of
12 black voters in district 1?

13 A. I guess it would have to do with some
14 understanding of how black or white or other people
15 vote.

16 Q. What's your understanding of what the term
17 "vote dilution" means?

18 MR. WALLACE: That really is a legal
19 opinion, and I'll object to it for that reason. He can
20 answer.

21 Q. You can provide your understanding if you have
22 one.

23 A. I don't know.

24 Q. What's your understanding of what "racially
25 polarized voting" means?

1 A. My understanding is that white people might
2 tend to vote in a block, black people might tend to vote
3 in a block, Chinese people might tend to vote in a
4 block, Japanese American might tend to vote in a block,
5 American Indians might to tend to vote in a block,
6 etcetera.

7 Q. And so you would agree that if voting in a
8 particular area is racially polarized, black voters are
9 usually not going to be able to elect a candidate they
10 want to elect unless they form a majority in that area?

11 MR. WALLACE: Object as facts -- object on
12 the basis based on facts not in evidence. I was trying
13 to think whether it was bad law or bad facts, but I
14 object to the form because it's probably both.

15 Q. You can answer the question.

16 A. I don't know the answer to it.

17 Q. Let me ask it again. You would agree based on
18 your understanding of what racially polarized voting is,
19 that if you have an area where there is racially
20 polarized voting, black voters will usually not be able
21 to elect the candidate that they're voting for unless
22 they form a majority of the population in that district?

23 A. Well I think what you're asking me is a
24 research question, so I can't offer an answer off the
25 top of my head without actually researching some

1 specific condition.

2 Q. Let me ask it one other way. If white voters
3 are usually voting for one candidate and black voters
4 are usually voting for the other candidate and both
5 white and black voters are voting cohesively, then in an
6 area where voters are supposed to be either white or
7 black, where black voters are the minority, they're
8 usually going to lose the election?

9 MS. WALLACE: Object to the form of the
10 question as seeking legal opinion on the meaning of both
11 "usually" and "cohesively." But you may answer.

12 A. I don't know.

13 Q. You understand you're being proffered as an
14 expert in this case?

15 A. I understand that.

16 Q. What are you an expert in?

17 A. Demography.

18 Q. You're not an expert electoral mapping drawing?

19 A. That's correct.

20 Q. And you're not an expert in voting behavior?

21 A. That's correct.

22 Q. Do you know what the duties of an expert in a
23 federal law suit are?

24 MR. WALLACE: Well, I'm going to object to
25 the form of that as being a legal opinion. But he may

1 answer.

2 A. Does it vary by judge or court?

3 Q. Well let me ask it this way: Do you think that
4 an expert is supposed to be objective?

5 A. That I believe. I think an expert should be
6 objective.

7 Q. And when did you first learn you were going to
8 give a deposition in this case?

9 A. Not too long ago. Mr. Wallace might be able to
10 give an answer on that one. I can't recall.

11 Q. Unfortunately, I'm not deposing Mr. Wallace.

12 A. Well, I -- a month ago? A week ago? I don't
13 recall. Certainly wasn't a year ago.

14 Q. And without going into the substance of any
15 conversations that you had with your attorneys, what did
16 you do to prepare for today's deposition?

17 A. I went back and reviewed the surrebuttal report
18 I prepared.

19 Q. How long did you spend preparing for today's
20 deposition?

21 A. Since I knew about being deposed, probably
22 several hours.

23 Q. Did you meet with anyone?

24 A. Other than Mr. Wallace?

25 Q. Other than Mr. Wallace.

1 A. No.

2 Q. You met with Mr. Wallace?

3 A. Yes.

4 Q. Again without asking you about the substance of
5 any conversations you had, about how many times did you
6 meet with Mr. Wallace?

7 A. This morning, yesterday.

8 Q. Did you review any documents -- and I'm sorry,
9 was that your complete answer, was this morning and
10 yesterday?

11 A. I believe so. We maybe talked on the phone or
12 e-mail, but I can't recall that. But in terms of
13 personally talking to him about it.

14 Q. Did you review any documents to prepare for
15 this deposition?

16 A. You asked me that question.

17 Q. And you mentioned your surrebuttal. Anything
18 else that you reviewed?

19 A. Not that I really read or reviewed.

20 Q. Did you take any notes during any of the
21 meetings or known calls that you had to prepare for this
22 deposition?

23 A. No.

24 Q. Did you take any notes when you were reviewing
25 documents to prepare the for deposition?

1 A. Not that I recall.

2 Q. Did you do any highlighting or margin note
3 writing in any documents as you prepared for this
4 deposition?

5 A. I generally don't review printed documents
6 because the printer at my house doesn't work, well --
7 I'm serious. So what I generally do is look at things
8 on-line.

9 Q. And you didn't make any marginal notes in any
10 digital documents you were reviewing?

11 A. No.

12 Q. I'm also in the faulty printer club, so I feel
13 your pain on that one.

14 Did you bring any documents with you to
15 today's deposition.

16 A. No.

17 Q. Okay. I'd like to spend some time talking
18 about the January report that we've been looking at
19 starting with the demographic analysis that you
20 conducted.

21 MR. WALLACE: Well at this point, I'm going
22 to state our position -- and it depends on what you're
23 looking at. The court order authorizes you to examine
24 him on the surrebuttal report. I don't doubt that there
25 are some things in the first report which may be

1 inextricably connected to the second report, so, you
2 know, I'll take it up an issue at a time. But we do
3 believe this is a deposition on the surrebuttal report.
4 And with that, you may proceed.

5 MR. SAVITZKY: Thank you, Mr. Wallace. And,
6 you know, we understand your position. Obviously, this
7 came up at the last deposition as well. And, you know,
8 we disagree and think this is our opportunity to take a
9 deposition of defendant's experts, but we can hash that
10 out another time, and your object is certainly noted.

11 BY MR. SAVITZKY:

12 Q. So with that, still looking at your January
13 report you should have in front of you, and it's marked
14 as Exhibit 2, I just wanted to get one point out of the
15 way. You say a few times in your report, paragraph 13,
16 for example, that Mr. Cooper argues -- "argues that
17 Mississippi's Supreme Court district 1 is a minority
18 black district at 49.3 percent." You can look at
19 paragraph 13 of your report to confirm that you say
20 this. It is, I believe, the second full sentence. You
21 characterize Mr. Cooper as arguing that district 1 is a
22 minority black district at 49.3 percent?

23 A. I do. I write that in here.

24 Q. And you actually at paragraph 33, you say it
25 again, you say: "Plaintiffs are relying on the any part

1 black voting age population of the district to
2 characterize district 1 as being minority black."

3 A. Yes.

4 Q. And in paragraph 39 you say -- you
5 characterize: "The claim that plaintiffs are making is
6 that district 1 'is a minority district' in need of
7 remediation."

8 A. Yes.

9 Q. Did you read Mr. Cooper's October report?

10 A. I did.

11 Q. Did you review the exhibits to the report?

12 A. I did.

13 MR. SAVITZKY: So I just want to mark the
14 October report now. This'll be Exhibit 9. Here's a
15 copy. One for Mr. Wallace.

16 BY MR. SAVITZKY:

17 Q. And just looking at page 19 of Cooper's October
18 report, just at the very top of the page, let me know
19 when you're there.

20 A. I'm there.

21 Q. He says: "District 1 is only a 4 percentage
22 point plurality BVAP district; right?"

23 A. Yes, it does say that.

24 Q. And that is the statement that you're pointing
25 to when you say that Cooper argues that Mississippi

1 Supreme Court district 1 is a minority black district?

2 MR. WALLACE: That's that fist question
3 you've asked him since I stated my objections, and I
4 object to it as being outside the scope of the order.
5 He may answer.

6 A. Yes.

7 Q. So what Mr. Cooper says he doesn't say
8 minority, he says plurality; he says it's plurality
9 black district; right?

10 A. He says that.

11 Q. So you think that paragraph 13 and those other
12 references in your report should be corrected?

13 A. But 49.29 percent is not a majority.

14 Q. Right. But Mr. Cooper doesn't characterize it
15 as a minority black district, he characterizes it at a
16 plurality black district; right?

17 A. You're correct.

18 Q. But you say Mr. Cooper "argues that Mississippi
19 Supreme Court district 1 is a minority black district at
20 49.3 percent?

21 A. I did.

22 Q. He doesn't argue that, does he?

23 A. That would be up to you. When someone says
24 it's 49.29 percent, that to me is a statement that's a
25 minority.

1 Q. Are a minority and a plurality the same thing?

2 A. A minority is when you're less than half,
3 depending on what the situation is. And to me, that's a
4 minority.

5 Q. A plurality would imply that you're the --
6 well, strike that. We'll leave it there.

7 You don't dispute that the voting age
8 population based on the census is the traditional
9 standard for measuring population for purposes of
10 drawing an electoral map?

11 MR. WALLACE: Objection as asking for a
12 legal opinion. He may answer.

13 A. I believe that's the case.

14 Q. And then you look at American Community Survey
15 data as well to analyze the demographics of the
16 population in Mississippi in your report; right?

17 A. Yes.

18 Q. And, I mean, we can, I think, starting at
19 paragraph 39 of your report, if you'd like a place to
20 look, but -- and you -- strike that.

21 Unlike data from the census, the America
22 Community Survey is an estimate; right?

23 A. It is. It's a sample-based estimate.

24 Q. Did you use the 2016, 2020 special tabulation
25 of the ACS?

1 A. I believe that's the case. I'd have to look at
2 the actual report to see what I used, but that's the
3 most likely one.

4 Q. And you say that using ACS estimates of CVAP or
5 citizens voting age population, the existing district 1
6 is majority black CVAP; right?

7 A. I believe that's the case. Can you point me to
8 the paragraph so I can see it?

9 Q. Yeah. I believe it's on paragraph 39.

10 A. Yes.

11 Q. Do you think that the existing district 1 is
12 reasonably configured?

13 MR. WALLACE: Objection as calling for a
14 legal conclusion, but he may answer.

15 A. I don't know. And the sense of configured, in
16 what manner? Geographically? Socially? Spacially?
17 Road-wise? Communication?

18 Q. Is existing district 1 compact?

19 A. I'd have to look at the data to, again, recall
20 if that's the case.

21 Q. Did you analyze the compactness and other
22 metrics of district 1 in conducting your opinions in
23 your January report?

24 A. I haven't looked at this report for quite a
25 while that you're bringing up, so I'd have to go back

1 and review it. I didn't review it prior to this
2 deposition.

3 Q. And you don't conclude anywhere in your report
4 that the black population of Mississippi is not
5 sufficiently numerous and geographically compact to
6 allow for one black majority supreme court district?

7 A. Again, I'd have to stress I'd have to go back
8 and look at the report because I haven't looked at it or
9 thought about it in a while.

10 Q. I mean, you're welcome to review the
11 conclusions if you want or --

12 A. If you want me to now, I can.

13 Q. The question is whether you concluded anywhere
14 that the black population in Mississippi is not
15 sufficiently numerous and geographically compact to
16 support one majority black supreme court district?

17 MR. WALLACE: Object to the form because
18 sufficiently numerous geographically compact requires
19 all kinds of legal conclusions.

20 A. And my answer, again, is I'd have to go back
21 and review all those since I -- I didn't do that prior
22 to this deposition.

23 Q. You don't conclude that it's not possible to
24 draw a compact majority black supreme court district in
25 Mississippi?

1 MR. WALLACE: Same. Objection he my answer.

2 A. I don't have a conclusion about that at this
3 point in time because it's not in my head.

4 Q. But you don't conclude that in your report
5 anywhere?

6 A. I'd have to look back at the report to review
7 it. I don't know. As I said, I haven't looked at this
8 report for quite a while, so I can't recall exactly
9 what's in it.

10 Q. So when calculating demographics of the
11 different districts, you also do some analysis to adjust
12 for prison population. Do you recall that?

13 A. I do.

14 Q. And that's starting at paragraph 46 of your
15 report. And you conduct this analysis by subtracting
16 the current populations of some of Mississippi's prisons
17 from the CVAP that you've calculated; right?

18 A. I believe that's the case, but I'd have to look
19 specifically again at it to recall because I don't
20 recall off the top of my head.

21 Q. Well, feel free to refresh yourself by looking
22 at paragraph 46 and neighboring paragraphs if you need
23 to before we proceed. And let me know when you're
24 ready.

25 A. I've looked at it.

1 Q. Okay. So you do this analysis of prison
2 populations by subtracting the current populations of
3 some of Mississippi's prison facilities from the CVAP
4 that you've calculated; right?

5 A. Yes.

6 Q. And specifically, you look at the three largest
7 prison facilities in the state of Mississippi; right?

8 A. I believe those are the three largest, yes.

9 Q. And you calculate the current population of
10 those three facilities that we looked at as 7,000
11 people?

12 A. Can you point to me where the -- where I've got
13 the number in there?

14 Q. Yeah. I'm looking at Table III E-1 on page 25.

15 A. And then what you're looking at is the right
16 hand total where it has 2,996 in private prisons and
17 4,050 in regional correction facilities to say it's
18 approximately 7,000?

19 Q. So that's right.

20 A. That's correct.

21 Q. And just to be clear, the count that you have
22 here is a partial count of the population of
23 incarcerated persons in Mississippi, right, you didn't
24 include every incarcerated person?

25 A. Such as in county jails and the like?

1 Q. Sure.

2 A. That's correct.

3 Q. And your analysis shows that there is a
4 higher -- and I'm quoting you know according to
5 paragraph 48, you say: "There's a higher proportionate
6 number of black prisoners in the three major prisons in
7 Mississippi than white prisoners overall and by gender."
8 Right?

9 A. Yes.

10 Q. And that table that we were looking at, Table
11 III E-1 indicates that black Mississippians are about
12 60 percent of the prison population even though they are
13 more like 36 percent of the voting age population?

14 A. That's an accurate characterization.

15 Q. And you know that in Mississippi, people with a
16 qualifying felony are disenfranchised for life not
17 merely when they are incarcerated?

18 A. I knew they were disenfranchised, I did not
19 necessarily know it was for life, but I suspect I think
20 I somehow knew that, yeah.

21 Q. And you don't try to estimate the number of
22 persons who are unable to vote, who are disqualified
23 from voting because of a qualifying felony conviction
24 but who are no longer incarcerated; right?

25 A. That's correct.

1 Q. And you say, I think, on paragraph 36:
2 "There's no practical way to measure or locate these
3 demographically by district in a meaningful way."

4 A. That's correct. I stated that.

5 Q. Did you review Mr. Cooper's rebuttal report
6 from February of 2023?

7 A. I believe I did, but I'd have to look at his
8 report again to refresh my memory.

9 MR. SAVITZKY: And we can mark that as well.
10 And we're on Exhibit 10. Here you are. And
11 Mr. Wallace. Okay.

12 BY MR. SAVITZKY:

13 Q. And looking at page 5 of this rebuttal report,
14 paragraph 9, Mr. Cooper discusses the study showing that
15 the total disenfranchised population based on qualifying
16 felony convictions in Mississippi that were rendered
17 between 1994 and 2017 is 56,000. Do you see that?

18 A. I do.

19 Q. And do you have any reason to dispute that?

20 MR. WALLACE: Now I will object as being
21 outside of the scope of the court order, but he may
22 answer.

23 Q. Do you have any reason to dispute that?

24 A. The only thing I question is, are they all in
25 Mississippi.

1 Q. Otherwise, you have no reason to dispute that's
2 an accurate assessment of the number --

3 A. I have no reason to dispute that's an accurate
4 assessment.

5 Q. And looking at the next paragraph, Mr. Cooper
6 says -- and sorry, one other point here before I move
7 on. Mr. Cooper says that of that 56,000, black
8 Mississippians account for over 60 percent of that
9 number?

10 MR. WALLACE: Same objection. He may
11 answer.

12 Q. Any reason to dispute that?

13 A. Again, I'd have to go look at the exact data
14 that he pulled or other sources to answer it fully, but
15 I have no reason at this point to dispute it.

16 Q. It's actually quite consistent with the number
17 that you found, isn't it?

18 A. It is.

19 Q. And that 56,000 represents convictions from the
20 23 year period 1994 to 2017?

21 A. I believe that's correct.

22 Q. And so Mr. Cooper then says in the next
23 paragraph, paragraph 10 on page 6 in his rebuttal
24 report: "It's clearly within the realm of possibility
25 that after factoring in felony convictions going back to

1 1948, two additional 23-year periods, the adjusted
2 eligible black CVAP for voters in district 1 may drop
3 below 50 percent." Do you dispute that that's within
4 the realm of possibility?

5 MR. WALLACE: Same objection. He may
6 answer.

7 A. Many things are in the realm of possibly. But
8 again, the question is how many people may have migrated
9 out of Mississippi or died.

10 Q. So --

11 A. All those numbers.

12 Q. So you agree that it's possible that 51 percent
13 CVAP once you adjust for all the persons who may have a
14 qualifying felony conviction, it could be under 50
15 percent?

16 MR. WALLACE: Same objection. He may
17 answer.

18 A. It could be either way depending on if they're
19 still alive or where they live.

20 Q. So that's a yes, it could be under 50 percent
21 prison adjusted CVAP?

22 A. That is a yes but it's qualified with the
23 follow-up study as I mentioned earlier, to follow up on
24 people who are in prison, discover where they're living
25 now, are they in Mississippi or out of Mississippi, are

1 they alive? Are they dead? That may affect the answer.

2 Q. You would agree that people -- that there are
3 likely people who were convicted of a qualifying felony
4 in 1960, 1970, still alive today?

5 MR. WALLACE: Same objection. He may
6 answer.

7 A. Yeah, that's -- that's a possibility, yeah.
8 It's also a possibility that people from other states
9 may have moved there, there are a lot of possibilities.
10 This is a research question, as I stress.

11 Q. Understood. So just briefly, I want to look at
12 a different part of your demographic analysis. I want
13 to turn back to paragraph 34 of your report. You
14 mention -- well, let me just read it. You say: "A
15 useful way to look at the distribution of WNH" -- white
16 non Hispanic -- "total and any part black total
17 population across the three districts is to use the
18 coefficient of variation." Do I have that right?

19 A. You do.

20 Q. And the coefficient of variation is the
21 standard deviation of the voting age population of the
22 three districts divided by the total voting age
23 population?

24 A. Not the total, the mean.

25 Q. Divided by the mean?

1 A. That's correct.

2 Q. And you say: "The coefficient of variation
3 shows the extent of variation relative to the mean."

4 A. It's normalized. That's what the term is,
5 because you could have one population that has a really
6 high mean if you're comparing it to another population
7 that has a low mean. And what you want to do is divide
8 the means into the standard deviation so you get a
9 relative basis for comparison.

10 Q. And you say you do this for total but also
11 white VAP, black VAP, and you say: "This shows that
12 white total is four times higher than that same per VAP
13 and black total is five times -- approximately five
14 times higher than that same VAP which serves to confirm
15 that white total and black total population are less
16 equally distributed across the three districts in total
17 VAP."

18 A. And remind me what paragraph --

19 MR. WALLACE: Which paragraph are we in?

20 MR. SAVITZKY: Paragraph 34.

21 MR. WALLACE: 34?

22 MR. SAVITZKY: Last sentence.

23 BY MR. SAVITZKY:

24 Q. You say looking at the data in this manner
25 confirms that: "White non Hispanic total and any part

1 black total population are less equally distributed
2 across the two districts than the total voting age
3 population." Right?

4 A. That's correct.

5 Q. Is that another way of saying that black and
6 white populations are not evenly distributed across
7 Mississippi geography?

8 A. It would be.

9 Q. And you would agree that large numbers of high
10 black VAP population are generally distributed north and
11 south along the Mississippi River in Mississippi?

12 MR. WALLACE: Now I'm going to object to
13 that for the same objection. He may answer.

14 A. I -- if you're asking me what my -- I would
15 call it a research of hypothesis. It's a good question
16 to ask as a starting point, but it's something you'd
17 have to investigate.

18 Q. And let's just briefly -- let's put a pin in
19 this page, but turn to page 96 -- excuse me, not page
20 96, paragraph 96 of your report on page 49. And just --
21 the second sentence of that paragraph, just take a look
22 at that and let me know when you're ready.

23 A. And it's paragraph 99?

24 Q. Paragraph 96, second sentence. Just take a
25 look and let me know when you're ready .

1 (Witness reviewing exhibit.)

2 A. Yes.

3 Q. You would agree that large numbers -- "Large
4 numbers of high percent any part black VAP population
5 are generally distributed north and south along the
6 Mississippi River; right?

7 A. Yes.

8 Q. Now having worked in Mississippi, studied
9 Mississippi demographics, you sort of know that's true
10 just from looking at the map and knowing the population,
11 there's a substantial amount of black population
12 concentrated in the Mississippi Delta and the capital
13 region; right?

14 MR. WALLACE: Same objection, but he may
15 answer.

16 A. Yes.

17 Q. And that's why it's not especially difficult to
18 draw majority black supreme court districts and include
19 the Mississippi Delta and the capitol regions?

20 MR. WALLACE: Same objection plus the
21 objection that is asking for a legal conclusion. But he
22 may answer.

23 A. I don't draw a congressional district, so I'm
24 not in a position to really answer that question.

25 Q. And you don't draw supreme court districts,

1 either?

2 A. Yeah, that's correct.

3 Q. So let's talk about the traditional districting
4 principles. And we're now in a section of your report
5 starting at paragraph 56, page 29. Are you familiar
6 with the principles that electoral map drawers consider
7 in drawing an electoral map?

8 A. Somewhat.

9 MR. WALLACE: Objection as to form as not
10 explaining what an electoral map drawer is.

11 Q. Do you understand that an electoral map drawer
12 is a person who draws electoral maps?

13 A. I do.

14 MR. WALLACE: With political authority or
15 sitting in his basement with a pad? Can you be more
16 specific.

17 Q. So you rely in your report on a few different
18 sources to discern the principles that a person drawing
19 an electoral map would consider; right?

20 A. Yes.

21 Q. One of the sources you rely on is a report from
22 the congressional research service, it discusses
23 principles for congressional redistricting?

24 A. I believe that's the case, yes.

25 MR. SAVITZKY: And we'll just mark that. We

1 are on Exhibit 11. Copy for you. Copy for Mr. Wallace.

2 BY MR. SAVITZKY:

3 Q. This is the report that you cite in your
4 January report? Just confirming, this is the report
5 that you looked at.

6 A. Give me a second here. I'm still trying to
7 organize the main report you were going through --

8 Q. Sure, sure.

9 A. -- so I can find things when we go back to it
10 again.

11 Q. And that's why, because we will certainly go
12 back here.

13 And this congressional research service
14 report is one of the sources that you relied on in your
15 January report too?

16 A. It is.

17 Q. And according to this report, and we can see on
18 page 3, page 3 of the document there -- the pagination
19 is at the bottom. That's front matter. There we go.
20 And just looking there, the report lists some of the
21 principles that map -- electoral map drawers consider;
22 right?

23 A. It does.

24 Q. And according to this source that you relied
25 on, those principles include assuring population

1 equality among districts within the same state. You
2 agree that's one of the principles to be considered?

3 A. That's one of the principles listed.

4 Q. You agree that's one of the principles listed
5 as traditional criteria for drawing electoral maps?

6 A. That's what it says here, yes.

7 Q. And another one that's listed is protecting
8 racial and language minorities from vote dilution while
9 at the same time not promoting racial segregation?

10 A. Yes.

11 Q. And another principle is promoting geographic
12 compactness and contiguity when drawing districts?

13 A. Yes, sir.

14 Q. And another principle is minimizing the number
15 of split political subdivisions and communities of
16 interests within districts?

17 A. Yes.

18 Q. And another principle is preserving historic
19 stability in the cores of previous districts?

20 A. Yes.

21 Q. And then looking at this list, the list
22 indicates that some of the considerations are more
23 widely adopted than others; right?

24 A. In terms of?

25 Q. How many states require them, how many states

1 have adopted them, there are little parentheticals after
2 each one that say how many states consider --

3 A. Yes, there's a different number of states
4 listed after some of these.

5 Q. So contiguity appears to be expressly embraced
6 as a required consideration by 22 states but core
7 retention by only 7?

8 A. Correct.

9 Q. So when it's discussed in paragraph 58 and 59
10 of your January report, you also relied -- and we can
11 put this one to the side, but we may refer back to it
12 again. You also relied on another multistate survey of
13 traditional districting principles from the National
14 Conference of State Legislators; right?

15 A. Point me to that paragraph where I state that,
16 please?

17 Q. Sure. This is Footnote 21 on paragraph 58,
18 says: "The National Conference of State Legislatures is
19 widely recognized, the nation's independence objective
20 and bipartisan authority of redistricting matters
21 published a series of principles that reflect
22 traditional districting principles that have both
23 informed -- that have been both informed by and adopted
24 by many states." You cite the report in the footnote,
25 continue on, and you say: "This guidance from the NCSL

1 is the basis of any assessment I make as an expert of
2 individual states or organizations, criteria, and
3 redistricting principles." Right?

4 A. Yes.

5 Q. So this NCSL guidance is the basis for your
6 assessment of the compliance of an electoral map with
7 traditional districting principles?

8 A. I use it as a guideline.

9 Q. A guideline to assess compliance with
10 traditional districting principles?

11 A. I use it as what's considered to use such as
12 core, retention, and so on, yes.

13 MR. SAVITZKY: And we can just mark that
14 next, Exhibit 12. Copy, copy. Okay.

15 BY MR. SAVITZKY:

16 Q. And just looking at the list of considerations
17 discussed right on this first page and then the bullets,
18 seems like a similar list of criteria to the one that we
19 just discussed; right?

20 A. It does.

21 Q. And so looking at right up on the first page,
22 we see the second paragraph, first sentence: "All
23 states must comply with the federal constitutional
24 requirements related to population and
25 antidiscrimination." Right?

1 A. I see that.

2 Q. And then we say -- or we see: "In addition to
3 population equality, Section 2 of the Voting Rights Act
4 prohibits plans to intentionally or inadvertently
5 discriminate on the basis of race which would dilute
6 that minority vote."

7 A. I see that.

8 Q. So then you agree those are considerations that
9 should be guidelines in assessing compliance of a map
10 with traditional districting principles?

11 MR. WALLACE: Objection. Again is asking
12 for a legal opinion. But he can respond.

13 A. My -- my answer is: I use these as guidelines.

14 Q. You use them as guidelines in forming any
15 opinions that you form about the compliance of the plans
16 offered in this case with traditional districting
17 principles?

18 A. Yes.

19 Q. And the NCSL report then says: "Well beyond
20 that, states are allowed to adopt their own
21 redistricting criteria or principles for drawing plans;
22 right?"

23 A. Yes.

24 Q. And then at paragraph 59 of your report -- I
25 think paragraph 59 of your report is basically a

1 verbatim recitation of the bottom of this first page of
2 the NCSL report?

3 A. I believe it -- that's where I found the
4 materials so that's cited in there. Is that the case?

5 Q. Yeah. It's -- it's certainly cited in the
6 footnote so I'm not trying to play gotcha. I just want
7 to make sure this is basically what, you know, what you
8 have done here in your report you say the traditional
9 redistricting principles that have been adopted by many
10 states, and then you list --

11 A. Yes.

12 Q. -- the principles and the descriptions thereof
13 from the NCSL report?

14 A. Yes.

15 Q. And those include compactness?

16 A. Yes.

17 Q. And they include contiguity?

18 A. Yes.

19 Q. An include preservation of counties in
20 political subdivisions?

21 A. Yes.

22 Q. They include preservation of communities of
23 interest?

24 A. Yes.

25 Q. And they include maintaining the cores of prior

1 districts to the extent possible?

2 A. Yes.

3 Q. And they include avoiding incumbent pairings?

4 A. Yes.

5 Q. And then the NCSL report goes on to indicate
6 that different states have adopted sort of different
7 subsets of these criteria; right?

8 A. Yes. I believe that's the case.

9 Q. And we can look at page 10 of this document.

10 MR. WALLACE: In Exhibit 12?

11 MR. SAVITZKY: Correct.

12 MR. WALLACE: Okay.

13 Q. And we can see Mississippi is included there.
14 And just looking at the NCSL description of the criteria
15 adopted for redistricting of Mississippi, core retention
16 is not one of the criteria that the NCSL report that you
17 relied on identifies as being adopted in Mississippi;
18 right?

19 A. We're in Exhibit 12; correct?

20 Q. Yes, page 10.

21 A. Thank you. And your question was?

22 Q. My question is: Core retention is not one of
23 the criteria that the NCSL report that you relied on
24 says that Mississippi has adopted for redistricting?

25 A. What I read here is require compact contiguous,

1 preserve political subdivision, preserve communities of
2 interest.

3 Q. And core retention is not one of the criteria
4 that Mississippi has adopted according to the NCSL
5 report that you rely on?

6 A. That would be correct.

7 Q. And now looking at paragraph 60 of your
8 report -- and I think it's possible we'll rely on this
9 again, but we can put the NCSL report up for now.

10 Looking at paragraph 60 of your report, you
11 say: "Mississippi code Section 53101," which also cited
12 in the NCSL report, "expressly identified a few criteria
13 for legislative districts." Right?

14 A. Yes.

15 Q. And in your report, you summarized the statute
16 is requiring the districts be compact, contiguous, and
17 preserve political subdivisions; right?

18 A. Yes.

19 MR. WALLACE: Object to the form as saying
20 "districts." It actually says "legislature districts."
21 But he may answer.

22 Q. And just looking at the language that you quote
23 in the block vote right below paragraph 60, would you
24 agree it's a pretty strong emphasis on county lines in
25 that language?

1 MR. WALLACE: Object to the form. But he
2 can answer if he can.

3 A. It reads: "Districts shall be structured as
4 far as possible and within constitutional standards
5 along county lines."

6 THE REPORTER: Sir, if you slow down,
7 please.

8 A. It reads: 60B, districts shall be structured
9 as far as possible and within constitutional standards
10 along county lines, if county lines are fractured, then
11 election district lines shall be followed as nearly as
12 possible."

13 Q. So this statute that you point to places the
14 emphasis on following county lines?

15 A. That's how I would read that.

16 Q. And you also in the last sentence of paragraph
17 60 which is the top of page 31, you also identify
18 communities of interest, preserving communities of
19 interest as a relevant consideration in drawing
20 districts in Mississippi.

21 A. Yes.

22 Q. And again just looking at that statute you
23 block quote there, core retention is not mentioned in
24 Mississippi's statute as one of the districting criteria
25 in Mississippi?

1 A. Correct.

2 Q. And you would agree that in considering the
3 different traditional districting principles drawing a
4 map, and electoral map drawer is going to have to
5 balance some of these different principles and
6 considerations?

7 MR. WALLACE: Object to form once again for
8 failure to identify electoral map drawer and asking for
9 legal conclusions. But you may -- and also being
10 waylaid under the court order. But subject to all those
11 objections, he may answer.

12 A. That would appear to be the case to me.

13 Q. Sometimes if you're putting a map -- an
14 electoral map together, you're going to have to make
15 tradeoffs between these different principles.

16 A. You have to make tradeoffs in anything we do in
17 life, correct.

18 Q. Including these principles, which --

19 A. Since it's such a generalized idea, I think
20 that you'd have to do that with these principles.

21 Q. And would you agree that different map drawers
22 could employ different approaches, make different
23 tradeoffs and each draw a map that in the end is
24 consistent with the set of principles we've been talking
25 about?

1 MR. WALLACE: Same objection as the last
2 one. He may answer.

3 A. In principle, that could happen.

4 Q. So let's talk about the different criteria that
5 we've been discussing one by one starting with
6 population equality. Why do you think population
7 equality, in your understanding, is an important
8 consideration in drawing an electoral map?

9 MR. WALLACE: Same objections. He may
10 answer.

11 A. Well as one example, if you had 500 people in
12 an area, you don't want to put 499 of them in one and 1
13 person in the other and then equal -- have some sort of
14 equal representation, whatever government form it would
15 be.

16 Q. Ever heard the expression one person, one vote
17 before?

18 A. I have.

19 Q. Population equality implements that principle;
20 is that right?

21 A. I believe so.

22 Q. And looking at Table III.D.1 on page 17 of your
23 report -- let me know when you're there?

24 A. I'm sorry.

25 Q. You report the population of the existing

1 supreme court districts, these are the current districts
2 in Mississippi, right, the VAP. Do you see that?

3 A. I do. I wouldn't say a report, the population
4 per se. These are subsets of the population in
5 Mississippi.

6 Q. Well you report the VAP in that first column
7 for each --

8 A. That's correct.

9 Q. -- of the three districts, the voting age
10 population. And you say in a footnote, Footnote 14 that
11 your numbers correspond to the numbers in Mr. Cooper's
12 report with respect to the demographics of the
13 districts?

14 A. I do.

15 Q. And just generally, you don't anywhere indicate
16 that there's any discrepancy between the numbers that
17 Mr. Cooper reports based on the census and the numbers
18 that you report based on the census?

19 A. I'd have to look through the full report, but I
20 believe that's the case.

21 Q. Now, you don't report population deviations for
22 each of these districts; right?

23 A. In the sense of?

24 Q. You don't report how different the VAP of each
25 district is from the ideal population size or mean

1 population size for all the districts?

2 MR. WALLACE: Objection. Comparing VAP to
3 mean total population size or some other mean population
4 size?

5 Q. The VAP of the district to -- to mean or ideal
6 VAP of the district.

7 MR. WALLACE: All right. Objection as to --
8 as based on a faulty legal theory. I don't think
9 there's a requirement for equality in VAP. But go
10 ahead, he may answer.

11 A. In -- so I'm not sure what you're getting at,
12 but in one sense, comparing deviations in the sense of
13 how much a number may vary from a mean across a number
14 of categories or districts, that's what your asking?

15 MR. SAVITZKY: You know what, I'll strike
16 that. Mr. Wallace makes a good point.

17 BY MR. SAVITZKY:

18 Q. You don't report population deviations to the
19 districts in terms of total population from the ideal
20 districts size?

21 A. Well, I'm not sure what the ideal district size
22 is. I mean in that sense, are you talking about a mean
23 or an average taken across a number of units?

24 Q. If there were equally populated districts, you
25 don't report the deviation of these districts from the

1 size of what an -- what an equally divided --

2 A. Thank you for clarifying that. Yeah, I
3 understand. No, I don't.

4 Q. You would agree that looking at that population
5 deviation is something that map drawers take into
6 account to asses that equal population principle that
7 we've been talking about?

8 MR. WALLACE: Same objection as before. He
9 may answer.

10 A. I -- it may depend on the situation.

11 Q. And we talked about that book that you -- that
12 Mr. Bryan and Mr. Morrison had written called
13 Redistricting, do you recall that?

14 A. Yes, I do.

15 Q. Is that another source that you relied on to
16 think about the different principles that mappers
17 consider?

18 A. I probably have looked through the book, again,
19 when I was looking at this, but I don't recall
20 specifically if I did.

21 Q. And let's just mark that. So this is
22 Exhibit 13, Redistricting, a Manual for Analysts,
23 Practitioners, Citizens, published as we discussed
24 earlier by Springer.

25 MR. WALLACE: This is exhibit which?

1 MR. SAVITZKY: 13.

2 MR. WALLACE: 13.

3 BY MR. SAVITZKY:

4 Q. Okay. And I just want to turn to page 47 of
5 this document here. And you let me know when you're
6 ready.

7 A. I'm there.

8 Q. And we see on page 47 that the authors list
9 some of the same criteria that we've been talking about;
10 right?

11 A. I do.

12 Q. And they say: "Substantial equality of
13 population has come to mean that the population
14 difference between the largest and smallest districts,
15 the total deviation may not exceed 10 percent of the
16 average district population." Do you see that?

17 A. Yes.

18 Q. Do you agree with Mr. Morrison and Mr. Bryan
19 that for purposes of drawing an electoral map,
20 substantial quality of population means trying to stay
21 within a plus or minus 5 percent of the ideal of average
22 district size?

23 MR. WALLACE: Objection as to asking for a
24 legal conclusion and for being outside the scope of the
25 court order. But he may answer.

1 A. I look at this as another guideline.

2 Q. You agree it's a reasonable approach to
3 implementing the consideration of equal population?

4 A. Well, it seems to be an approach to doing it,
5 yes.

6 Q. And by the way, the next one that Mr. Bryan and
7 Mr. Morrison mention is minority representation?

8 A. I see that.

9 Q. Okay. So looking back at your Table III.D.1 on
10 page 17 of your report -- and I understand this is only
11 VAP -- it does look like, at least looking at VAP for
12 now --

13 A. And where was that again?

14 Q. This is on page 17 of your report.

15 A. Thank you.

16 Q. And just looking at VAP, it looks like
17 district 2, almost 800,000 people district 1, 715,000.
18 So there's a significant difference in total voting age
19 population; right?

20 A. I read that district 1 as being 7,000 --
21 716,000, not 715,000.

22 Q. Right. So -- but there's a significant about
23 80,000 person delta between the size of those two
24 districts in terms of VAP?

25 A. There's a difference of approximately 80,000

1 people.

2 Q. And looking at Mr. Cooper's October report
3 which is Exhibit 9, if we could pull that back out.
4 Here it is. So looking over at Mr. Cooper's October
5 report --

6 A. Thank you.

7 Q. -- page 19, Figure 8, let me know when you're
8 there.

9 A. I'm there.

10 Q. So Mr. Cooper does report total population in
11 these districts in Figure 8; right?

12 A. Yes.

13 Q. And Mr. Cooper also reports the percent
14 deviation from the ideal district size or mean district
15 size or mean district size; right?

16 A. If he calculated it, that would be the case.

17 Q. And you don't dispute that looking at
18 Mr. Cooper's Figure 8, the population deviation under
19 the current scheme of supreme court districts is greater
20 than plus or minus 5 percent?

21 MR. WALLACE: All right. Same objections as
22 before. Asking for a legal conclusion, not authorized
23 by the court order, and in addition, not relevant to any
24 issue raised in the complaint. But he may answer.

25 A. The -- there's one deviation that's minus 5.39

1 percent, and one -- another one that's plus 5.07
2 percent.

3 Q. So then the population deviation range for the
4 existing supreme court district plan is greater than
5 plus or minus 5 percent?

6 MR. WALLACE: Same series of objections. He
7 may answer.

8 A. Slightly greater than plus or minus 5 percent.

9 Q. And that's sort of made sense when you consider
10 these districts haven't been changed since 1987?

11 MR. WALLACE: Same series of objections. He
12 may answer.

13 A. I'm not equipped to answer other than looking
14 at what the population history is over the same period
15 of time.

16 Q. And you reviewed Mr. Cooper's October report?

17 A. Yes.

18 Q. You reviewed the population statistics that he
19 provided for the illustrative plans?

20 A. Yes. And again, as I stressed, I haven't
21 looked at those in a long time, so I'm not going to be
22 able to speak off the top of my head. So if we refer to
23 them, it might help refresh my memory.

24 Q. Okay. Well looking at page 27 of Mr. Cooper's
25 report which provides both a map and those population

1 statistics for illustrative plan one?

2 A. And the page number was?

3 Q. Page 27?

4 A. Thank you.

5 Q. And looking there, you wouldn't dispute that
6 Cooper's illustrative plan 1 brings the population
7 deviation down under plus or minus 5 percent; right?

8 MR. WALLACE: Same series of objections. He
9 may answer.

10 A. In what he labels a table as Figure 11, he has
11 district 1 as a minus 3.14 percent, district 3 as plus
12 3.02 percent.

13 Q. So you wouldn't dispute that he brings the
14 population deviation down below plus or minus 5 percent
15 with his illustrative plan 1?

16 A. Three percent is less than 5 percent.

17 Q. But the range is down by four points overall?

18 A. Yes.

19 Q. And then looking at illustrative plan 2, page
20 30, you wouldn't dispute that for illustrative plan 2,
21 the population deviation is cut down to less than
22 3 percent total?

23 MR. WALLACE: Same series of objections.
24 You may answer.

25 Q. Plus or mine about point-and-a-half?

1 A. In figure 14, he shows district 1 at minus 1.59
2 percent, district 2 at 1.05 percent, and district 3 at
3 0.53 percent.

4 Q. So would you agree that illustrative plan two
5 significantly reduces account population deviation from
6 the existing plan?

7 A. I would not use the term "significant"
8 necessarily. It reduces it.

9 Q. And then looking at the figures for least
10 change plan 1 on page 34, same questions. Has
11 Mr. Cooper for this plan reduced the population
12 deviation for the supreme court districts below that
13 plus or minus that 5 percent threshold?

14 MR. WALLACE: Same objections. He may
15 answer.

16 A. In district 1, he has minus 4.65 percent,
17 district 2, 1.2 percent, district three, 3.44 percent.

18 Q. So the total deviation there is less than plus
19 or minus 5 percent?

20 A. It is.

21 Q. And then look at just the next page, we have
22 those figures for lease change plan 2, and again
23 Mr. Cooper has reduced the deviation range below plus or
24 minus 5 percent?

25 MR. WALLACE: Same objections. He may

1 answer.

2 A. You're talking about Figure 18?

3 Q. Correct.

4 A. I have to ask a question why he's labels tables
5 and figures, but -- that's odd.

6 Q. Back to you.

7 A. I'll answer it, just -- hard to look at a table
8 that's labeled as a figure. Okay. So here he has
9 district 1 at minus 2.55 percent, district 2 is at 5.70
10 percent, district 3 is minus .2 -- 2.51 percent.

11 Q. So deviation range is less than plus minus 5
12 percent?

13 A. Well, in two of them.

14 Q. The total range -- I would say total range is
15 less than 10 percent?

16 A. You're talking about going from minus 2.5
17 percent to 5 percent, yes.

18 Q. Correct.

19 A. Yes.

20 Q. Okay. So with respect to the traditional
21 redistricting principle of population equality,
22 Mr. Cooper's plans all improve on the existing plan?

23 MR. WALLACE: Same series of objections. He
24 may answer.

25 A. His plans show ranges that generally are below

1 plus or minus 10 percent.

2 Q. Plus or minus 5 percent?

3 A. Plus or minus 5 percent not exclusively, but
4 generally.

5 Q. And just in terms of the idea of weighting
6 every vote equally, one person, one vote Mr. Cooper's
7 plans tends to weight every vote more equally than the
8 existing plan?

9 MR. WALLACE: Same series of objections. He
10 may answer.

11 A. These are not voters, it's a total population.

12 Q. They -- that is correct. Mr. Cooper's plans
13 tend to weight the representation of persons in
14 Mississippi more equally than the existing plan?

15 MR. WALLACE: Same objection and the
16 question is what does "representation" mean. But he may
17 answer if he understands it.

18 A. I don't understand it.

19 Q. Mr. Cooper's plans adhere more closely to the
20 ideal of every person having an equal share of
21 representation?

22 MR. WALLACE: Objection. And he may answer.

23 A. Mr. Cooper's plan shows the -- as you're
24 discussing, the ranges in terms of deviations from
25 ideals which I think are calculated by the means. Is

1 that correct?

2 Q. As I understand it.

3 A. Yeah. So if he's calculating the mean, he's
4 showing less deviation. Now, let me ask you a question.
5 Would it be better to use the mean or the median?

6 Q. I'm not going to answer your question while
7 we're on the record.

8 A. Yes. So there's -- and part of the issue about
9 using means is, what's the different between a mean and
10 a median? What does one of them do that the other one
11 doesn't? It's a question -- it's not fair to ask you
12 the question, I understand. But it's a question that
13 you can see that I'm asking in general. Why use a mean?
14 Means are subject to outliers. If you've got outliers
15 in certain districts, it's going to weight the mean this
16 way or the other way. So one question you could ask of
17 all this entire analysis is: Why not use the mean.
18 That's my point.

19 Q. Do you know whether courts in evaluating
20 compliance with the principle of population equality use
21 mean or median or what metric they use?

22 A. I do not, not. I can tell you as a
23 demographer, in certain cases I would use a median much
24 more than I'd use a mean. It depends on what's going on
25 with outliers and observations and what the distribution

1 looks like. If you have a skewed distribution, I
2 would -- and if you want to say this represents kind of
3 the average, I would select a median over a mean,
4 probably.

5 Q. I'm tempted to ask you one question because it
6 is interesting.

7 A. It is. Please ask.

8 Q. Well, I just -- I mean on the question of one
9 person, one vote which is, as we discussed, the ideal
10 that's -- that is implemented, would a median not --
11 would the use of a median to determine equal population
12 among districts not lead to situations where districts
13 were unequally populated?

14 MR. WALLACE: He opened this, so I'll let
15 him answer that.

16 A. It's possible. What I would tend to look at
17 and with any kind of averages like this is, I would look
18 at what the distributions look like for them and then
19 maybe even display both of them. They might give you
20 supporting answers, they might give you different
21 answers.

22 Q. But relying on the mean allows you to ensure
23 that the actual population of each district is as equal
24 as possible?

25 A. Again, that's one way to measure what averages

1 are. In not every case does it represent, you know,
2 where the bulk of the people are. If you've got
3 something that's an extreme outlier -- income is a
4 classic -- a whole bunch of people have low incomes, one
5 person has a real high income, what does it do to the
6 mean? It drives it way up. So if you're saying here's
7 the mean income but 85 percent of the people are below
8 that mean, does that really characterize the whole set
9 of people?

10 And that's what gets back to my question
11 about maybe it's better to use the median in some of
12 these cases. So that's why I have a difficult time kind
13 of answering some of your questions that it's -- are
14 they -- is more equal to do this, because it would, I
15 think, would require some more research, and that
16 research would involve looking at different types of
17 averages. And whether or not courts use it, I don't
18 know the answer to that.

19 Q. So you think it would be appropriate to use the
20 median population of each district to assess whether
21 population equality is --

22 A. I would look at it as a -- possibly along means
23 and different types of means. There might be a need for
24 a harmonic mean. I don't know the answers in advance.
25 I look at it as a research question. Do you follow me?

1 I'm not saying one's better than the other, but it may
2 be the case -- again, depending on the distributions, if
3 you have a distribution where people are really
4 clustered around one point, a mean is probably going to
5 be good, and if symmetrical, the distribution. If you
6 have a skewed distribution, it's not symmetrical, then
7 it may be the means is better. But it's a case by case
8 situation where you have to evaluate what the data are
9 showing you.

10 Q. So let's move on to the next districting
11 principle. Minority vote dilution, you would agree
12 consistent with the sources you relied on that we've
13 discussed already that protecting against minority vote
14 dilution is another consideration that an electoral map
15 drawer has to think about?

16 MR. WALLACE: Objection to vagueness,
17 objection as to asking for a legal conclusion, objection
18 as to being outside the scope of the court order. But
19 he may answer.

20 A. I'm not sure what a given map drawer would do.
21 But I think vote dilution would be a consideration and
22 something to do with redistricting.

23 Q. For example, the congressional research service
24 report that you cite said protecting racial language
25 minorities from vote dilution is a consideration to be

1 taken into account?

2 A. Yes.

3 Q. And you would agree that the existing Supreme
4 Court district 1 is 49.3 percent black voting age
5 population?

6 A. I believe that's the case. Point me to where
7 it's at in here again since I haven't reviewed this
8 report in a long time.

9 Q. Well, we can look at Mr. Cooper's report on
10 page 17. I believe those numbers are accurate. Page
11 16, excuse me.

12 A. Thank you.

13 Q. Statistics of the current plan.

14 A. I'm here. So the question was?

15 Q. The question was: You'd agree that the black
16 voting age population of the current district 1 is 49.3
17 percent, 49.29?

18 A. In 2020 it's 49.29 in district 1.

19 Q. Uh-huh. And you would agree -- and we can look
20 at those numbers -- for example, on page 27 of
21 Mr. Cooper's report, we start talking about the numbers
22 to the illustrative plans. You would agree that
23 Mr. Cooper's plans increase the black voting age
24 population of district 1?

25 A. Are you talking about Figure 11?

1 Q. Figure 11, Figure 13, the figures we talked
2 about.

3 A. In --

4 Q. Mr. Cooper's plans all increase the black
5 voting age population of district 1?

6 A. In figure 7, it shows district 1 in 2020 as
7 having 49.29 percent; in Figure 11, illustrative plan 1,
8 2020 census, it shows district 1 with a percent 18 plus
9 black, which I'm assuming is the voting age population,
10 just stated a different way, is 55.31 percent.

11 Q. So Mr. Cooper's illustrative plan 1 increases
12 the black voting age population of the district by just
13 6 points?

14 A. That's correct.

15 Q. And looking at Figure 14 on page 30,
16 illustrative plan 2 increases the black voting age
17 population of the district by a little under 5 points?

18 A. You're asking about district 2 now?

19 Q. District 1. Excuse me.

20 A. In district, Figure 14 shows it as being 54.19
21 percent.

22 Q. All right. So 4.9 percent increase in black
23 voting age population from 49.29; right?

24 A. It's an increase from that, yes.

25 Q. A 4.9 percent increase?

1 A. Approximately, yes.

2 Q. So we talked earlier about racially polarized
3 voting. Assuming the existence of cohesive racially
4 polarized voting patterns, increasing the black voting
5 age population at district by 5 or 6 points is going to
6 give black voters in that district a better chance of
7 electing their preferred candidate; right?

8 MR. WALLACE: Objection to the form,
9 objection as to being outside the scope of any report,
10 and objection as to being outside the scope of the
11 court's order. But he may answer if he can.

12 A. Could you give me more hypotheticals on it?
13 Would this be assuming that all the race groups vote as
14 a block, for example?

15 Q. Correct. Assuming block voting by black
16 voters, block voting by white voters for different
17 candidate, if you increase the black voting age
18 population by 5 or 6 points as Mr. Cooper does, black
19 voters are going to have a better chance at electing
20 their preferred candidates?

21 MR. WALLACE: Same objections. He may
22 answer.

23 A. So you're -- all else equal?

24 Q. Yeah.

25 A. Everything else equal, that's how you're asking

1 the question. In block voting, etcetera, etcetera,
2 would appear that that would be the case.

3 Q. Now let's talk about contiguity. You don't
4 dispute that all the illustrative plans outlined in
5 Mr. Cooper's reports are contiguous, do you?

6 MR. WALLACE: Same set of objections. He
7 may answer.

8 A. I'd have to go back and look at what he did
9 since I haven't reviewed this report and looked at it
10 for months until today.

11 Q. What is "contiguity" in your understanding?

12 A. It would -- meaning that you're trying to
13 retain some kind of existence over time as you go
14 through time.

15 Q. If I --

16 A. The characteristics would remain the same,
17 there's continuity. It's not an abrupt change.

18 MR. WALLACE: I think he asked about the
19 contiguity not continuity.

20 Q. Correct.

21 A. In that sense, it means geographic location of
22 people separated from one another.

23 Q. Correct.

24 A. Or units separated from one another.

25 Q. Correct. And in terms of geographic

1 contiguity, all the districts in all Mr. Cooper's plans
2 are contiguous; right?

3 A. I'd have to look, but I believe that's the
4 case. What you're asking is, there's not a county, say,
5 in northeast Mississippi that's isolated and part of a
6 district 1, for example.

7 Q. Yeah. He didn't, like, just show Chickasaw
8 County in district 1 or something?

9 A. That's correct.

10 Q. Okay. Same as the enacted plan, also
11 contiguous?

12 A. I believe that's the case, yeah.

13 Q. So let's talk about compactness. Paragraph 72
14 of your report, page 38. If you can turn there, that
15 would be advisable. You say: "Compactness is a tool
16 that can be used in redistricting to compare the
17 relative compactness of existing districts against new
18 districts to determine whether the new districts entail
19 minimal or large-scale changes from the existing
20 districts."

21 A. And that's paragraph 72?

22 Q. Yes.

23 A. Thank you.

24 Q. Starting with the words "compactness is a
25 tool."

1 A. I'm there.

2 Q. You say: "Compactness is tool a that can be
3 used in redistricting to compare the relative
4 compactness of existing districts against new districts
5 to determine whether the new districts entail minimum or
6 large-scale changes from the existing districts."

7 A. Corrects.

8 Q. What is the basis for that characterization of
9 what compactness is?

10 MR. WALLACE: Same objection as being
11 outside the scope of the court's order, but he may
12 answer.

13 A. In the sense of the legal requirements, what
14 compactness is, or some other kind of definition?

15 Q. I just -- where did you get this
16 characterization of compactness that you offer up here?

17 A. Are you asking me -- I'd have to go back and
18 look at my notes as to where I got it. It's not on the
19 top of my head. As I said, I haven't looked at this
20 report in months.

21 Q. What does it mean to say that "compactness is a
22 tool that can be used in redistricting to compare the
23 relevant compactness of districts"?

24 A. In that sense, it means how spread out are
25 they.

1 Q. When you say "compactness is a tool," are you
2 referring to the different compactness metrics like
3 Reock and Polsby-Popper and Schwartzberg?

4 A. That's one of the ways of looking at it, what
5 the summary measures are that it might be.

6 Q. Would you agree that compactness is a term that
7 refers to whether a district is regularly shaped?

8 MR. WALLACE: Same objection plus legal
9 conclusion, he may answer.

10 A. Yes.

11 Q. And looking at a passage from the CRS report
12 that's Exhibit 11 -- do we still have that around here?
13 It should be under -- oh, right here. There we go.

14 Looking back at Exhibit 11, page 11, let me
15 know when you're there.

16 A. I am.

17 Q. Okay. That report from the CRS that you relied
18 upon says: "From the geographic perspective,
19 compactness is usually defined by reference shapes, e.g.
20 most compact shape is a circle, followed by a square, a
21 rectangle or references to geographic measures such as
22 geographic dispersion perimeter measures or population
23 measures." Do you agree with that?

24 A. Yes. It's consistent with what I answered
25 before, how distributed our points are.

1 Q. And as you understand it, are there different
2 ways that someone evaluating a map can know whether a
3 district is sufficiently compact?

4 A. You named some of the measures.

5 MR. WALLACE: Same objections as before.
6 And person's evaluating a map is completely vague. If
7 you're talking about a judge, I object to asking for a
8 legal conclusion. You may answer.

9 A. There are different measure for summarizing
10 what compactness is, as you listed before.

11 Q. And there's no one particular method that's the
12 best method for assessing compactness?

13 A. That was my understanding looking at the
14 different measures, they each have their own strengths
15 and weaknesses. So in that sense, you're certain to
16 look at things like averages.

17 Q. So, for example, in paragraph 73, you say:
18 "There's no professional consensus on the right measure
19 and every widely used measure works differently?

20 A. Correct.

21 Q. So there's no one definitive measure of
22 compactness?

23 A. From the standpoint from what I could tell
24 looking at the literature, yes, that appears to be the
25 case.

1 Q. And Mr. Cooper in his responsive report on
2 page 8 -- and we can look at it or not, but I'll read
3 you the quote and you can --

4 A. Just read it, sure.

5 Q. But he says: "Redistricting experts and map
6 drawers commonly employ an eyeball test to assess
7 whether a plan is reasonably compact." Do you agree
8 with Mr. Cooper's statement there?

9 A. I don't know what map drawers do commonly.

10 Q. Because you're not a map drawer?

11 A. Or -- that's correct.

12 Q. You don't evaluate maps?

13 A. Well, I don't know -- I don't know if people
14 who evaluate maps use an eyeball test or not routinely.
15 I don't know the answer to that.

16 Q. You're not familiar with the eye test or the
17 eyeball test for measure compactness?

18 A. What would the eyeball test be?

19 Q. The eye test?

20 A. You're just looking at somebody's -- how much
21 does it vary from being a circle, for example?

22 Q. Yeah. You're just looking with your eye to
23 assess the visual compactness of a district.

24 A. I can understand people doing that, use a lot
25 of visual assessments in all sorts of things, but

1 whether that goes to the point where you're actually
2 going to say or use that in something or whether or not
3 you're going to use a metric, I don't know the answer to
4 that.

5 Q. And let's just pull up what's been marked as
6 Exhibit 13. This is that text that Mr. Bryan and
7 Mr. Morrison wrote. And do you still have that,
8 Exhibit 13?

9 A. Yeah, somewhere.

10 MR. WALLACE: I'll give him mine if you can
11 give me the page number.

12 MR. SAVITZKY: Page 48.

13 MR. WALLACE: Okay.

14 MR. SAVITZKY: And you tell me when you're
15 there.

16 THE WITNESS: Thank you.

17 BY MR. SAVITZKY:

18 Q. Do you see there's a paragraph about
19 compactness there?

20 A. I do.

21 Q. And the last sentence says: "No one method is
22 best and the colloquial eyeball test of a district's
23 appearance and function may be germane."

24 A. I see that.

25 Q. So having reviewed the text written by

1 Mr. Morrison and Mr. Bryan, would you agree that the
2 eyeball test is one measure that is used to asses the
3 compactness of a district?

4 MR. WALLACE: Same objection as asking for a
5 legal conclusion and being outside the scope of the
6 order. The he may answer.

7 A. And again, what I would stress is that they
8 wrote that as one possibility, but whether or not I
9 agree with the eyeball test being germane is not
10 necessarily my opinion. I tend to look more at metrics
11 than eyeball test, but I understand there's a need for
12 things like that when you're -- when you don't have good
13 measures or you're initially looking at a project and
14 you need something qualitative to start off with. So it
15 goes back to my answer being I'm not sure if it's
16 germane or useful or not or whether or not map drawers
17 use it all the time.

18 Q. Okay. Is it fair to say that a mapper who has
19 drawn many plans, a person who draws electoral maps and
20 has drawn many plans and looked at many districts is
21 going to sort of develop a better sense of whether a
22 district is compact visually?

23 MR. WALLACE: Objection to the vagueness and
24 in addition to not knowing who a map drawer is, not
25 knowing what "better" is.

1 A. I can't answer that question. I don't know.

2 Q. Is it fair to say that someone who reviews more
3 electoral districts is going to develop a sense of
4 whether a district is more or less visually compact?

5 MR. WALLACE: Same objection. He may
6 answer.

7 A. And my answer again is I don't know.

8 Q. On page 38, Footnote 29 of your report, you
9 cite a lecture by Gary King called "How to Measure
10 Legislative District Compactness If You Only Know It
11 When You See It." Is that something that you rely on?

12 A. And that's footnote?

13 Q. 29.

14 MR. WALLACE: 29 on page 38.

15 MR. SAVITZKY: Yep.

16 A. Yes, I recall. Let me look at what I actually
17 put in the text for that. Specifically, that says: "In
18 contrast, academics have shown that compactness has
19 multiple dimensions and have generally many conflicting
20 measures."

21 Q. And let's just mark as Exhibit 14 this is the
22 web page here. And looking at the one, two, three --
23 third sentence -- the second sentence too. Well
24 actually, take a look at it and then let me try to ask a
25 summary question. Let me know when you've read the

1 first couple sentences.

2 A. Okay.

3 Q. So basically what they are saying is that
4 academics have developed many very complex measurements
5 of compactness but courts and other observers see
6 compactness as a sort of simple visual
7 you-know-it-when-you-see-it-type test. And they say
8 both of those are right, there are many complex and
9 multidimensional tests of compactness, but there is also
10 what they say is a particular unit dimensional ordering
11 that represents a common understanding of compactness in
12 the law across people. Am I accurately summarizing what
13 King is saying here?

14 A. And then he goes on to say that he's developing
15 a statistic model that predicts with high accuracy what
16 that is, yes.

17 Q. Based on this unidimensional sort of common
18 understanding that he's discerned?

19 A. Yes.

20 Q. And I just -- it's actually -- we're not going
21 to spend too much more time on it, but it totally's
22 fascinating. Did you look to the slides for the lecture
23 that King did?

24 A. I'd have to -- I don't recall. Like I said,
25 this is -- it's so long ago I did the report, I can't

1 remember what I looked at now or not.

2 Q. So I'm just going to mark the lecture slides as
3 Exhibit 15 here. And again, I don't want to spend a ton
4 if time on it because this is a long, long lecture, but
5 if you can -- I'll point you to the page. At 424, there
6 is a series of illustrating --

7 A. Yes.

8 Q. -- this unidimensional --

9 A. Uh-huh.

10 Q. -- you know it when you see it --

11 A. Uh-huh.

12 Q. -- metric; right?

13 MR. WALLACE: Page 4 --

14 MR. SAVITZKY: It's marked 424 at the
15 bottom.

16 MR. WALLACE: 4, slash, 24?

17 MR. SAVITZKY: Correct.

18 MR. WALLACE: Okay. I was looking for 424.
19 Okay.

20 Q. So you go down and each one is a click, you
21 click, click, click through --

22 A. Yeah.

23 Q. -- we see as we move through, once we see all
24 four districts there, this unidimensional ordering. All
25 under the header: "A simple single compactness

1 dimension that you know when you see." Right? And as
2 we go on and see the text below, it says dimension is
3 intuitive; right?

4 A. That's what he states.

5 Q. Okay. And looking at this, does this give you
6 a sense of what the eyeball test is?

7 MR. WALLACE: Well objection to the extent
8 the eyeball test is a legal test in which he has no
9 expertise. But if he has an opinion on this report
10 subject to the fact that it's contrary to the court's or
11 order, he may answer.

12 Q. And setting aside from whatever it might mean
13 as a legal matter, just --

14 A. I have an opinion.

15 Q. Yeah, go ahead.

16 A. So if you look at the four figures on one of
17 these and since they all say 4/24, I'll have to point
18 this out to you.

19 Q. Yes, I see it.

20 A. Okay. Suppose that the eyeball test I'm
21 looking at the first figure on the left, to the second
22 figure to the right of it, they're somewhere dissimilar.
23 If I look at the figure on the left to the far figure on
24 the far right, they're very dissimilar. So these are
25 kind of simple examples of what could take place. Is

1 figure -- the third one to the right really different
2 than the fourth one to the right? Is it more or less
3 compact? Just eyeballing, it might be difficult to say.
4 And again, these are examples that he put up to
5 illustrate the point he's trying to make.

6 So in some cases, it may be that the eyeball
7 test doesn't work, and I could point to each of these
8 examples right here. Is the figure, the third most
9 right one really more compact than the fourth most right
10 one? You know, there would be questions from people
11 about that. And as you get closer and closer, instead
12 of having these discreet illustrations, if you had more
13 of a continuous model and you're getting closer and
14 closer to the one on the far right, which one is more or
15 less compact? It would be hard to answer, wouldn't it?

16 Q. So looking at -- so would you agree if you're
17 visually with your eyes, you can make gross distinctions
18 but perhaps not fine distinctions?

19 A. Or it may be the case that if you've got
20 something as extreme as what's on the far left here as
21 he examples and what's on the far right, then you can
22 say yes, it looks like the one on the far left is very
23 much more compact than the other ones. And there's
24 going to other cases where I think the eyeball test is
25 going to be difficult to measure that.

1 Q. All right. And Mr. Cooper states -- now we're
2 looking at -- going back to page 8 of his responsive
3 report. This one we can definitely -- if you want to
4 keep a copy for later, it is a quite fascinating
5 lecture, but --

6 A. Thank you.

7 Q. Mr. Cooper states at page 8 of his rebuttal
8 report which I believe is Exhibit 10, which you should
9 have it there, he says --

10 A. I've got 9. Bear with me.

11 Q. Yes.

12 A. Thank you. And where on Exhibit 10 are we
13 going?

14 Q. Page 8.

15 A. Thank you.

16 Q. And he says: "Using the eyeball test, the
17 illustrative plans and the least changed plans, I have
18 drawn are reasonably compact." And you are not claiming
19 to dispute that statement, are you?

20 MR. WALLACE: Objection as to being outside
21 the bounds of the court's order, but he may answer.

22 A. And I was not asked to review this after he
23 wrote this report, so I can't give you an answer whether
24 or not I dispute at this point or -- or not at this
25 point. I have to go back and reanalyze what he did.

1 Q. I mean, you testified earlier that you did
2 review Mr. Cooper's rebuttal report.

3 A. Yes, but I was not asked to actually do
4 something with it, to actually analyze it. Do you
5 follow me? So I looked at it, I read it, but I was not
6 tasked with or asked to go on and say something back in
7 regard to it.

8 Q. And as you sit here now, you're not disputing
9 that statement?

10 A. I can neither dispute or not dispute it at this
11 point. Again, it's a research question, and I wasn't
12 asked to do that.

13 Q. Well, I'm asking you as you sit here now, do
14 you dispute the statement Mr. Cooper makes that under
15 the eyeball test, the plans he drew are reasonably
16 compact?

17 A. And again, I stress that since I haven't looked
18 at what he's arguing here with sufficient time ahead of
19 it to know, I can't answer that question directly.

20 Q. Well, given that you're not saying you do
21 dispute it, can I take that to mean that you're not
22 currently disputing it?

23 A. I -- I'm not saying that. I don't have an
24 opinion at this time on it. Would that be better?

25 Q. That'll do.

1 A. Okay.

2 Q. So getting back to the compactness analysis
3 that you did, we'll talk more about your report. In
4 your report, you analyze compactness cores of the
5 illustrative plan supreme court districts that
6 Mr. Cooper drew, and you concluded that they are less
7 compact than the existing plan. Is that generally --

8 A. I believe that's the case, yes.

9 Q. And you mentioned earlier this is -- Bryan
10 GeoDemographics did this analysis new?

11 A. They did at my request, computed the scores,
12 put data together, that's correct.

13 Q. And as far as you know, they used the ArcGIS or
14 ArcView program?

15 A. I'm pretty sure that's what Tom Bryan used.

16 Q. Were you able to verify the results that they
17 provided to you?

18 A. In what manner?

19 Q. I mean did you independently verify the results
20 that they gave you with respect to the compactness
21 scores of the district?

22 A. You mean go ask somebody else who does GIS to
23 see if that's the case?

24 Q. Sure, or do it yourself.

25 A. I'm not capable of doing it myself in that

1 regard since I didn't run GIS programs. And no, I
2 didn't go ask anybody else to go review it.

3 Q. And just looking at pages 40 to 43, we have
4 these various tables. Did you design these tables in
5 this layout here or did Bryan?

6 A. I asked him to put these together and then --
7 and give me information on them in regard to all these
8 measures of doing that, and that's what he did.

9 Q. So Bryan GeoDemographics put these Excel tables
10 together?

11 A. At my request, yes.

12 Q. And after reviewing these various compactness
13 scores, you didn't conclude that the illustrative plans
14 are insufficiently compact in terms of adhering to
15 traditional districting principles, did you?

16 MR. WALLACE: Objection to asking for a
17 legal conclusion on what's insufficient. But he may
18 answer.

19 A. That's correct. Insufficient is not something
20 I can speak to. They're just different from what the
21 existing plans were.

22 Q. You're not offering an expert opinion on
23 whether the illustrative plans compactness scores are
24 insufficient to meet traditional districting principles?

25 MR. WALLACE: Objection on -- objection to

1 the extent traditional districting principles may be
2 incorporated into the law, and I'm not sure how much
3 that is, but I think you're still asking him for a legal
4 opinion. But he may answer.

5 A. Yeah, and insufficient is -- they're -- the
6 "scores" are not as good on average as the score of the
7 existing plan is my recollection on these in looking at
8 it. Whether or not that means insufficiency, I don't
9 know.

10 Q. You didn't offer -- you're not offering any
11 expert opinion that the compactness scores for the
12 illustrative plans mean that the districts plans are not
13 compact?

14 MR. WALLACE: Objection to vagueness, but he
15 may answer.

16 A. And again my answer is, they're -- the scores
17 in the sense of compactness are not as compact as what's
18 in the existing plan.

19 Q. You didn't consider whether the compactness
20 scores of the illustrative plans are within the normal
21 or acceptable range of compactness for an electoral
22 districting map?

23 MR. WALLACE: Objection to vagueness as to
24 normal and acceptable, but he may answer.

25 A. I did not.

1 MR. SAVITZKY: And I'm now going to mark --
2 where are we at -- 16. We're on the second binder. I'm
3 now going to mark as Exhibit 16 a paper called
4 "Redrawing the Map on Redistricting" which was cited in
5 Mr. Cooper's rebuttal report. There you go, copy for
6 Mr. Wallace.

7 MR. WALLACE: 16, you said?

8 MR. SAVITZKY: Yes.

9 MR. WALLACE: Okay.

10 BY MR. SAVITZKY:

11 Q. So in looking at page 8 of Exhibit 16, we can
12 see that what the authors of this report did in their
13 Table 5 is, they looked at the mean compactness scores
14 for congressional districts in every state. This is
15 following the 2010 redistricting cycle.

16 A. What are the page numbers?

17 Q. They are in very light gray at the bottom of
18 the page.

19 A. Oh, wow.

20 MR. WALLACE: There's something there.

21 A. I see it okay. And you're asking about page 8?

22 Q. Yeah.

23 A. The table, not the Figure 5.

24 Q. Correct. Table 5, exactly.

25 A. Table 5.

1 Q. Exactly. So looking at this table, we can see
2 in that the last round of congressional districting, the
3 mean Polsby-Popper score for congressional districts in
4 Mississippi was 23.33; is that right?

5 A. I'm trying to go down and find Mississippi. I
6 see it. Thank you. So they're ordered by rank of
7 score. Okay. 23.33.

8 Q. Is that right?

9 A. Yes.

10 Q. And the mean Schwartzberg score is 4758, .4758?

11 A. 47.58, yes.

12 Q. And the mean Convex Hull score is 76.84?

13 A. Yes.

14 Q. And I just want to note for the record that
15 these are presented as whole numbers rather than
16 fractions, but I -- usually, I see them presented as
17 fractions between 0 and 1 or decimals between 0 and 1,
18 but I think we understand that we're referring to the
19 same range of between 0 and 1 or in this case between 0
20 and 100; is that right?

21 A. I'd have to look to know that that's the case,
22 but I believe you, you have no reason to tell me
23 otherwise; right?

24 Q. Yeah. And then just looking at the Reock
25 score, we have mean Reock score of 38 --

1 A. That's correct.

2 Q. -- 08? Right. So you didn't look at some type
3 of benchmark like this to assess the compactness scores
4 for Mr. Cooper's illustrative districts?

5 A. I did not.

6 Q. And just turning back to what again I think has
7 been marked as Exhibit 10, Mr. Cooper's responsive -- or
8 rebuttal report, that's right, Exhibit 10. Or actually,
9 we can look at your report at page 40. You list the
10 scores for illustrative district 1 right here or for all
11 of it, illustrative --

12 MR. WALLACE: Hang on. What page in --

13 MR. SAVITZKY: Page 40 of your January
14 report. And do keep what we marked as Exhibit 16 handy
15 because I want to just do a little quick head-to-head
16 look.

17 BY MR. SAVITZKY:

18 Q. So looking at the scores, what I want to do is
19 compare the mean compactness scores for Cooper's
20 illustrative district 1 and mean compactness scores for
21 the Mississippi congressional districts that we were
22 looking at on page 8 of Exhibit 16.

23 A. So we're comparing the supreme court district
24 scores to the congressional district scores.

25 Q. Yes. Mean, mean. Exactly.

1 MR. WALLACE: All right. Let me objection
2 to the relevance of comparing a document -- a document
3 prepared by an expert witness with a plan ordered by the
4 United States District Court for the Southern District
5 of Mississippi, because Mississippi in 2012 was governed
6 by a plan written by Judge Kalley (phonetic), Judge
7 Wingate, and Judge Bramlette.

8 Q. And I'll ask the question of the witness: You
9 don't have any reason to think that the congressional
10 districting plan that was put into place in Mississippi
11 after the 2010 cycle was insufficiently compact or
12 didn't comply with traditional districting principles,
13 do you?

14 A. I don't have an opinion on that.

15 Q. Okay. And what Mr. Cooper says when he cites
16 this report that we've introduced as Exhibit 16 is:
17 "Even in terms of compactness scores, the plans that
18 I've drawn are superior to many congressional
19 districting plans drawn in the past decade." That's the
20 statement in his report.

21 MR. WALLACE: And where it is in his report?

22 MR. SAVITZKY: On pages 8 to 9, paragraph
23 19.

24 MR. WALLACE: Okay.

25

1 BY MR. SAVITZKY:

2 Q. So now looking at that, just looking at the
3 scores, the mean compactness scores that you report on
4 page 40 in Table III F.7.a and comparing those to the
5 mean compactness scores for this Mississippi
6 congressional district, we see Polsby-Popper score of
7 Cooper's illustrative plan 1 as .27 mean, so that's a
8 little higher than .23?

9 MR. WALLACE: Objection to relevance and
10 objection as being outside the scope of the court's
11 order. But he may answer if he can.

12 Q. You would agree that that Polsby-Popper scores
13 are pretty similar?

14 A. Given that they -- for supreme court districts
15 compared to congressional districts.

16 Q. Yeah.

17 A. They look fairly similar.

18 Q. And the Convex Hull scores, also very similar,
19 Cooper's plan is just a little bit higher but basically
20 identical, .78 versus .6784?

21 MR. WALLACE: Same objections. He may
22 answer.

23 A. I see the mean score Convex Hull here for
24 Mississippi as being in the congressional district,
25 76.84.

1 Q. Yep.

2 A. -- and then for Cooper's illustrative plan, I
3 see it at 78.

4 Q. So Cooper's a little higher, but basically
5 identical?

6 A. It's a little higher.

7 Q. Okay. And Reock, it's a littler lower, 37 for
8 Cooper's illustrative 1, .348 for the congressional
9 districting plan --

10 A. Yes.

11 Q. -- right? So if you were to use Mississippi
12 congressional districts from last cycle as a benchmark,
13 Cooper's plans are in line with that benchmark?

14 MR. WALLACE: Same objections, but he may
15 answer.

16 A. It's difficult to say when you're crossing
17 districts like this and -- are they crossing points in
18 time as well whether or not they're suitable benchmarks?

19 Q. But assuming that the benchmark is suitable,
20 they're comparable?

21 A. It's a big assumption you're asking me to make
22 without knowledge of exactly, you know, all the details
23 in here. But if you want me to say everything else
24 being equal, again, and assuming that it's all the same,
25 they're comparable.

1 Q. Okay. And looking at -- now we'll look at
2 Cooper's responsive report page 10, Figure 1.
3 Mr. Cooper does a compactness analysis, looks head --
4 the head-to-head comparison between the existing plan
5 and the illustrative plan 1. Do you see that in
6 Figure 1?

7 A. I do.

8 Q. And with respect to the mean compactness, you
9 would agree that existing supreme court plan and
10 illustrative plan 1 are .01 apart on the Polsby-Popper
11 score; right?

12 A. Yes.

13 Q. And they're .01 apart on Convex Hull; right?

14 A. Yes.

15 Q. Cooper's a little higher on Convex Hull,
16 existing is a little higher on Polsby-Popper?

17 A. Yes.

18 Q. You would agree that a .1 difference is
19 basically identical?

20 A. It depends on the contexts.

21 Q. Okay. You would agree they're substantially
22 similar?

23 A. Again, depends on the context. You know, if
24 you're looking at this from -- if you're doing a sample,
25 really large samples may have a very small difference in

1 some measure you're looking at like income, and \$10 is
2 enough to say it's different. So I'm saying it depends
3 on the context.

4 Q. In the context of evaluating compactness scores
5 like Polsby-Popper and Convex Hull, you would agree that
6 a difference of .01 is negligible?

7 A. In general, that's what I agree with, yes. So
8 in that context, yes.

9 Q. Great. And on the Reock -- oh, sorry. And on
10 the Schwartzberg metric, the plans are exactly
11 identical?

12 A. Yes.

13 Q. So the two plans are either exactly or
14 essentially the same on three different metrics of
15 compactness?

16 A. Yes.

17 Q. And then with respect to the Reock score, the
18 mean Reock score for the existing plan is better at .51
19 versus .36?

20 A. It's higher, yes.

21 Q. Higher. Excuse me. But you don't conclude
22 that Reock is a better or more appropriate metric than
23 any of these other metrics, do you?

24 A. One of the ways to look at them, because of all
25 these issues about it is to start looking at doing some

1 of an average of all the measures too since they all
2 have their strengths and weaknesses.

3 Q. Are you aware of any instance in which the
4 different compactness metrics have been and or blended
5 together?

6 A. Some of the work I've done, yes.

7 Q. In the work that you've done, you averaged or
8 blended together compactness metrics like Polsby-Popper,
9 Reock, and Convex Hull?

10 A. Or taking averages of them. Is that in this
11 report that I did? I'm just asking? Since I haven't
12 looked at it in a long time, I just asking if I did
13 that.

14 Q. I mean, I'll represent to you that I don't
15 recall your doing that in your report.

16 A. Okay. Then I may not have done it in is this
17 report.

18 Q. Are you aware of any other person analyzing
19 compactness of district maps who's tried to blend or
20 average together the different metrics?

21 A. Yeah, I think Tom Bryan has.

22 Q. When did he do that?

23 A. I don't recall, but I think he has.

24 Q. Okay. And looking at Figure 2 on the same page
25 of Mr. Cooper's report, he conducts a head-to-head

1 comparison between existing district 1 and illustrative
2 plan district 1, right, so now he's looking at the mean
3 scores but at the compactness score for district --
4 district 1 in particular?

5 A. Yes.

6 Q. And identical Polsby-Popper scores for both
7 districts; right?

8 A. Yes.

9 Q. And on two of the remaining metrics, Convex
10 Hull and original Schwartzberg, the illustrative plan
11 district 1 is more compact than existing district 1;
12 right?

13 A. It has higher scores in the Convex Hull and
14 lower score in the original Schwartzberg.

15 Q. Has a lower score. Okay. Kind of got -- so
16 just stepping back, fair to say that on some of the
17 metrics, Mr. Cooper's illustrative plan one performs
18 better and on some of the metrics, the existing plan
19 performs better?

20 A. In the sense of --

21 MR. WALLACE: Objections -- same objections.
22 He may answer.

23 A. Yes.

24 Q. So let's talk about political subdivision
25 splits. You agree that all of Mr. Cooper's illustrative

1 plans are drawn entirely on whole counties?

2 A. I'd have to refresh my memory and look at his
3 report, but I believe that was the case.

4 Q. You agree that necessarily because there are no
5 county boundaries split, the number of county splits is
6 zero?

7 A. Correct.

8 Q. And you agree the number of precinct or
9 election districts splits also necessarily zero?

10 A. Since they're all within the same county, yes.

11 Q. And so in terms of that metric of county and
12 precinct splits, plans are identical, existing plan,
13 Cooper's illustrative plans, all of them zero county
14 splits, zero precinct splits; right?

15 A. Correct.

16 Q. Let's talk about communities of interest.
17 What's your understanding of a community of interest?

18 MR. WALLACE: Objection to the extent you're
19 asking for a legal opinion, but he may answer the
20 question. Oh, and it's out of the court order, but
21 everything has been so far, so he may answer that.

22 A. So there's a definition. Do I have it in the
23 report somewhere of -- of that community of interest?
24 Is it in the report.

25 Q. I'm not sure as I sit here whether you provide

1 a comprehensive definition in your report but --

2 A. And I don't recall if I did or didn't since I
3 haven't looked at it in a long time.

4 Q. I mean, I ask you as someone who of offering
5 analysis of --

6 A. So in general if you're asking me off the top
7 of head what it means, "community of interest," it
8 represents a lot of shared social and other
9 characteristics, economic characteristics.

10 Q. You would agree it, basically, is a community,
11 a group of people that share some common resource or
12 interest or priority?

13 A. Or social -- social, economic, and other
14 cultural characteristics, yes.

15 Q. Got it. You would agree there are many ways to
16 define a community of interest?

17 A. There could be, yes.

18 Q. So like a city or town could be a community of
19 interest?

20 A. I guess it depends on the composition that's
21 their -- what criteria someone's specifically looking
22 at.

23 Q. It could be a region or a group with a shared
24 history or culture?

25 A. It could be.

1 Q. Could be a region or a group of people with
2 shared policy interests or shared needs?

3 A. It could be. But I'd look at all those as
4 possible dimensions of something that could be even
5 broader if you're looking at community of interest.

6 Q. So -- and is it fair to say when we talk about
7 communities of interest in the districting context, the
8 idea is that where reasonable, you should try to group
9 people with common interests in the same district?

10 MR. WALLACE: Objection as seeking a legal
11 opinion, but he may answer.

12 A. That's my picture of it.

13 Q. And I'll represent to you that on page 48 of
14 that redistricting book which has been marked as Exhibit
15 13, Morrison and Bryan say: "Respecting existing
16 communities of interest is often a proxy for ensuring
17 that people of common interests are grouped within the
18 same district." Does that -- do you agree with that
19 statement?

20 A. Yes.

21 Q. Now, you don't analyze communities of interest
22 anywhere in your January report; right?

23 A. I don't believe so. I'd have to go back and
24 look in the sense of what the cluster analysis I did
25 was.

1 Q. Setting aside the cluster analysis, which we'll
2 talk about, you don't do any analysis that's relevant to
3 communities of interest?

4 A. Not that I recall.

5 Q. And you don't dispute that Mr. Cooper
6 considered Mississippi planning and development district
7 as a community of interest and evaluated that in his
8 report?

9 A. I believe that he did.

10 Q. And you don't dispute that a map drawer could
11 consider Mississippi's planning and development district
12 as a community of interest?

13 MR. WALLACE: Same objection as to meaning
14 of "map drawer." He may answer.

15 A. It's possible.

16 Q. As I think you point out in the beginning of
17 your report, Mississippi Supreme Court districts are
18 used for transportation, public service commission,
19 they're used for a number of appointed boards; right?

20 A. They are.

21 Q. So whether the interest of Mississippi's
22 various planning and development districts are fractured
23 or not by the designing of a plan could be important for
24 that reason as well?

25 MR. WALLACE: Objection to the vagueness of

1 the importance. He may answer.

2 A. It would be.

3 Q. So in looking at -- and now we're back on
4 Mr. Cooper's October report, paragraph 35. This is
5 Exhibit 9, I believe, yeah.

6 MR. WALLACE: Paragraph what?

7 MR. SAVITZKY: 35.

8 MR. WALLACE: Okay.

9 MR. SAVITZKY: And I'll give you the page if
10 that would be helpful. It is page 18. And let me know
11 when you're there. I'll just clear this out.

12 THE WITNESS: Thank you. I'm there.

13 BY MR. SAVITZKY:

14 Q. And we can see on paragraph 35, Mr. Cooper
15 says: "I show in the Figure 6 map" -- and if you want
16 to look at it, it's on the preceding page -- "the 1987
17 plan splits five of the ten regional planning
18 districts." And then he lists them. You don't dispute
19 that, do you?

20 A. Let's see. Let me go back here again. So
21 you're talking about Figure 6?

22 Q. Yeah. Figure 6 is the existing plan overlaid
23 on those planning districts. Mr. Cooper says five of
24 the ten districts -- planning districts are split in the
25 existing plan. You don't dispute that, do you?

1 A. No.

2 Q. And he says: "Supreme court district 1
3 contributes to each one of those splits, South Delta is
4 the only planning district entirely within supreme court
5 district 1." You don't dispute that, do you?

6 A. No.

7 Q. And now turning to paragraph 51 of Mr. Cooper's
8 report, that would be on page 26, still on exhibit 9.
9 You don't dispute Mr. Cooper's statements in
10 paragraph 51 that: "Illustrative plan 1 splits two
11 planning districts, North Delta and Central, rather than
12 five as in the 1987 plan?

13 A. I believe that's correct.

14 Q. And looking ahead to paragraph 56, you -- on
15 page 31, you don't dispute Mr. Cooper's statement the
16 illustrative plan 2 splits three planning districts
17 rather than five as in the enacted plan?

18 A. That's correct.

19 Q. Are you familiar with the Mississippi Delta?

20 A. The Delta counties, the area?

21 Q. Or the area that's the region in Mississippi
22 Delta?

23 A. Yes, I am.

24 Q. Is it fair to say based on your knowledge of
25 Mississippi that the Delta is a culturally,

1 historically, demographically, socioeconomically
2 distinct region?

3 MR. WALLACE: Objection to vagueness and
4 asking for a legal conclusion and being out of time
5 under the court's order, but he may answer.

6 A. It certainly shares characteristics that are
7 common internally that are not common elsewhere in the
8 state of Mississippi.

9 Q. And as someone who studied the demographics of
10 Mississippi, you would agree the Delta is culturally,
11 historically, demographically distinct?

12 A. Of other places in Mississippi?

13 Q. Yes.

14 A. Yes.

15 Q. And I would think it's fair to say that the
16 Mississippi Delta is one of the most culturally,
17 historically, demographically distinct geographic
18 regions in the entire South if not the nation. Would
19 you agree with a that?

20 MR. WALLACE: Same objection, but he may
21 answer.

22 A. People in New Orleans might disagree.

23 Q. Well, one of the most?

24 A. Yeah.

25 Q. Would you agree with that?

1 A. Yeah, I believe it is. Are you talking about a
2 personal opinion as opposed to a professional opinion?

3 Q. Yeah.

4 A. Absolutely.

5 Q. Fair to say based on your knowledge of
6 Mississippi, that the Delta has distinct needs and
7 interests, for example, when it comes to health and
8 education?

9 MR. WALLACE: Objection as to meaning of
10 distinct in addition to previous objections, but he may
11 answer if he can.

12 A. It may or may not. There's certain sections of
13 the state that are not in the Delta that may share some
14 of those characteristics and needs in common with Delta
15 counties. So again, I would say it's a research
16 question, not something I can just answer off the top of
17 my head from a professional opinion. As a personal
18 opinion, I would say yes, in general I think there are
19 issues like that that are common to a lot of Delta
20 counties, but they may be common with counties elsewhere
21 in Mississippi too.

22 Q. But the concentration of those needs in the
23 Delta is somewhat unique?

24 A. Again, it may be. But part of the issue you're
25 talking about is rural. Are rural areas of really

1 Northeast Missouri really different in the Delta in
2 terms of some of the needs? That's -- again, I don't
3 know the answer to that off the top of my head of the --
4 looking at rural areas that are high in poverty that may
5 or may not have the same racial distributions, that may
6 or may not have the same access to resources. So I
7 would suspect while there definitely are distinct areas
8 of interest in the Delta counties, I think they may
9 share some things with the counties elsewhere in the
10 State of Mississippi too.

11 Q. You'd agree that the Mississippi Delta could be
12 considered a community of interest?

13 A. It could be. It depends on what kind of
14 criteria you're looking at.

15 Q. Would you consider it a community of interest?

16 A. Again, it depends on what someone was asking
17 me. From the ecological standpoint? From the cultural
18 standpoint? From the music standpoint?

19 Q. Sure.

20 A. Yeah. It could vary. You know, there are
21 places on the Delta that would share a lot of common
22 history in terms of plantation stuff with the counties
23 over on the Alabama border, for example, and they're not
24 contiguous, they're different. So if you look at the
25 counties in areas of Northeast Mississippi where they

1 sing not Delta Blues but Hill Blues. You know, they're
2 different styles of music, so --

3 Q. One aspect of the culturally distinct nature of
4 the Delta?

5 A. That's one, yeah.

6 Q. And the existing supreme court plan fractures
7 the Delta?

8 MR. WALLACE: Objection to the meaning of
9 the word "fractures," but he may answer.

10 A. I -- it's -- whether or not it fractures the
11 Delta, I can't say.

12 Q. But we can just look briefly at page 16 of
13 Mr. Cooper's report right there --

14 A. Sure.

15 Q. -- and just looking at the map, the Mississippi
16 Delta is divided under the existing supreme court
17 districting plan; is that fair to say?

18 A. Does page 16 show the supreme court districts
19 in colors, is that what you're saying?

20 Q. Correct.

21 A. And under the existing supreme court plan,
22 you're asking me how is it fractured?

23 Q. I'm asking you if the existing plan divides the
24 Delta.

25 A. Well, in what sense is divide the Delta? Are

1 you --

2 Q. Divides the Delta -- excuse me. The plan
3 divides the Delta between multiple districts?

4 A. So parts of the North Delta that are in here?
5 In the sense of these are, again, the planning districts
6 that are named in this map? So from a planning district
7 standpoint, the North Delta district is in a separate
8 supreme court district than is the South Delta district.

9 Q. And just setting aside the planning districts
10 for the moment, are you generally aware of which
11 counties are in the Mississippi Delta, the region, the
12 Mississippi Delta, as you understand it?

13 A. I do. You're talking about from Tunica down
14 towards Vicksburg generally?

15 Q. And thinking about that region, that set of
16 counties from Tunica down to Vicksburg, the existing
17 supreme court plan divides that region between different
18 supreme court districts; right?

19 A. If you're looking from the standpoint of Delta
20 counties, yes.

21 Q. And we can just turn briefly to Mr. Cooper's
22 illustrative plan 1 on page 27. And just looking at
23 that plan and thinking about the Mississippi Delta
24 region from Tunica Don to Vicksburg, Mr. Cooper's
25 illustrative district 1 unites the Delta in one

1 district; right?

2 A. He also had some of the counties that I
3 wouldn't put in the Delta in that district, so it splits
4 off from other areas. I mean, that's what it looks like
5 just looking at his map.

6 Q. But in terms of the distinct region that we've
7 been talking about, the Mississippi Delta, it is kept
8 together in Mr. Cooper's configuration of the supreme
9 court map; right?

10 A. You know, I'd have to think about DeSoto
11 County, whether or not it's really a Delta county or
12 not, that he's got on there, but that's one possibility.

13 Q. Setting aside DeSoto County, the Delta is
14 united in Mr. Cooper's illustrative plan 1?

15 A. Generally speaking, I would agree to that.

16 Q. And just looking at page 30 of the report at
17 illustrative plan 2 -- are you on page 30?

18 A. I am.

19 Q. And you can see even if you include DeSoto
20 County, the Delta is united in this version of the plan;
21 right?

22 A. Yeah, it varies again because now Lincoln
23 County is outside of it, and it was inside the Delta
24 initially.

25 Q. Would you say that Lincoln County is in the

1 Mississippi Delta?

2 A. I'd have to look specifically, as I don't know
3 the answer to that, if it's a Delta county or not, if
4 I'd label it that way. I don't know what all the
5 characteristics are in Lincoln County. I can just see
6 looking at the two maps, that's one difference right
7 there.

8 Q. Lincoln County is south of Vicksburg, isn't it?

9 A. It's east.

10 Q. South and east?

11 A. Yeah.

12 Q. Okay. All right. Let's talk about core
13 retention. And turning back to your January report,
14 look at Table III.F.5 on page 37 of your January report.

15 MR. WALLACE: On page what?

16 MR. SAVITZKY: 37.

17 MR. WALLACE: Okay.

18 BY MR. SAVITZKY:

19 Q. Oh, excuse me. So your core retention analysis
20 begins on page 31, paragraph 62, but let's look at that
21 page 37, and look at that table that you have, it's the
22 core retention analysis by plaintiff's plan. Let me
23 know when you're there.

24 A. It may be a while since I have so many papers
25 here.

1 MR. SAVITZKY: When we take a break for
2 lunch, I'll come over and see what I can clean up there.
3 Page 37.

4 MR. WALLACE: Now you're getting into
5 somebody else's report, that your problem.

6 THE WITNESS: Yeah, that's it.

7 MR. WALLACE: Is this yours? We're missing
8 20 pages of it.

9 THE WITNESS: It's in here somewhere.

10 MR. WALLACE: I'll give you mine.

11 MR. SAVITZKY: Do you mind if I come around
12 and sort things out or --

13 MR. WALLACE: I can give him mine if you
14 want to get on with --

15 MS. SAVITZKY: That's fine. Yeah, during
16 the break, we can sort it out.

17 BY MR. SAVITZKY:

18 Q. So just looking at Table III.F.5, your analysis
19 is that Cooper's illustrative plan 1 keeps
20 74.3 percent of Mississippians in the same district as
21 they were in in the existing supreme court plan; right?

22 A. Yes.

23 Q. And your analysis is that Cooper's illustrative
24 plan 2 keeps 66.8 percent of Mississippians in the same
25 district as they were in the existing plan; right?

1 A. Correct.

2 Q. And you say -- and we don't need to turn, I'll
3 represent to you -- you can turn there if you want. But
4 I'll represent to you in the first instance in
5 paragraph 15 of your report you say: "Core retention
6 for the illustrative plans is low." You use the word
7 "low." Do you recall that?

8 A. I do.

9 Q. What's the basis for your opinion that keeping
10 a supermajority of Mississippians in the same district
11 is a low level of core retention?

12 MR. WALLACE: Objection as being outside the
13 scope of the court's order, but he may answer.

14 A. It's just the drop-off in the percent of people
15 that are maintained.

16 Q. Well I guess my question is: Low compared to
17 what?

18 A. Yeah, that's a good question. Yeah.

19 Q. I mean, did you compare this level of core
20 retention to --

21 A. No. And that's the case where just I used my
22 judgment and said it looked low. I was comparing it
23 more and likely to what the existing plan was.

24 Q. And --

25 A. So it's lower.

1 Q. And just -- so what is the basis for your
2 judgment that it's low?

3 A. It would be comparing it to the existing plans.

4 Q. Well, the existing plans are a hundred percent
5 the same as the existing plan. So what's your basis for
6 saying that this level core retention is low as opposed
7 to, you know, relatively high? Most of the population
8 is kept in the same district.

9 A. I hear you. I -- it just looked to me like it
10 was low when you get down to those numbers, that's all.
11 Just it's just my person opinion that it appeared to be
12 low.

13 Q. Someone else could look and these numbers and
14 say that's a relatively high level of core retention?

15 A. They could.

16 Q. Now, in addition to looking at core retention
17 in terms of total population in the same district, you
18 also break down the differences in population
19 assignments by race between the existing plan and the
20 illustrative plans; right?

21 A. Yes.

22 Q. And what do you think is the purpose of that
23 analysis?

24 MR. WALLACE: Same objection as to being
25 outside the scope of the court's order, but he may

1 answer.

2 A. Yeah, in the one sense that since the case is
3 about voting rights and specifically about black voting
4 rights, I thought it would be useful to look at that,
5 the issue of race.

6 Q. So on page 33, just flip back a couple pages.
7 On page 33 top of the page you say -- and this is
8 discusses illustrative plan 1, by way of example, you
9 say: "Only half of the white, non Hispanic population
10 from district 1 is retained, while 76.9 percent of the
11 any part black population is retained." Right?

12 A. Correct.

13 Q. So is your point that the population -- is your
14 point that comparatively more white population has moved
15 out of the district? Is that what you're saying?

16 A. That's what the numbers show in a relative
17 sense, yes.

18 Q. And what is -- is in your view, the relevance
19 of that in assessing these districts?

20 MR. WALLACE: Objection as to asking A., out
21 of time; B., asking for a legal opinion. He may answer
22 if he can.

23 A. It just looks to me like their racial
24 differentiation was different in the sense of what
25 percent of one group is moved out, what percent of the

1 other group that was moved out or stayed, that's all.

2 Q. And discussed before that illustrative plan 1,
3 district 1 runs north to south on the western side of
4 the state encompassing the Delta, the counties along the
5 Mississippi River; right?

6 A. Correct.

7 Q. And that configuration is different from the
8 sort the Y-shaped configuration of the district 1 where
9 you have a band of counties going east towards Alabama
10 that are also included in existing district 1; right?

11 A. That's correct. All the districts generally
12 speaking in the existing plans run east to west
13 generally speaking.

14 Q. So, I guess, doesn't it intuitively make sense
15 that comparatively, more white population would be moved
16 out of the district if you're moving that band of
17 counties stretching east to Alabama out of the district
18 and including the entire Mississippi Delta in the
19 district?

20 MR. WALLACE: Objection to the vagueness of
21 'makes sense' in addition to the previous objections,
22 but he may answer if he can.

23 A. Looking at race as a possible index of things
24 it would mean that some proportion of people may be
25 accustomed to having -- having things in common with

1 elsewhere are now going to be put into whether they're
2 white or black in places that might have differences.
3 That's all.

4 Q. I guess I just mean doesn't it sort of make
5 sense that you would see comparatively more white
6 population moved out of the district if you're
7 reconfiguring the district so that while maintaining
8 equal population, you're uniting the Mississippi Delta,
9 which --

10 MR. WALLACE: Same objection. He may
11 answer.

12 A. My answer to that in general is that Northern
13 Delta may not have as much in common with the Southern
14 Delta as you think. I'm just pointing out the fact that
15 you're moving differentially people by racial groups
16 around in doing this.

17 Q. And just looking at page 28 of Mr. Cooper's
18 report, and that's Exhibit 9 just for the record.

19 A. Page?

20 Q. Excuse me. Page 28, Figure 12. Let me know
21 when you're there.

22 A. I'm there.

23 Q. So just looking at this map, you would agree
24 that this shows illustrative plan 1 overlaying with the
25 boundaries of congressional district 2, current

1 congressional district 2; is that right?

2 A. That what it appears to do.

3 Q. And you would you agree that illustrative plan
4 district 1 was configured similarly to congressional
5 district 2 in the current congressional plan?

6 MR. WALLACE: Objection, I guess, to the
7 vagueness of "similarly," but he can answer.

8 A. It is similar.

9 Q. All. Now, is it -- and you can put that one
10 down for now. Thank you.

11 So in addition to the illustrative plan, you
12 also did a core retention analysis of the least changed
13 plans. And we're looking now again at your report --
14 your January report, page 37, that same chart that we
15 were looking that. And that would be the summary table
16 of the core retention analysis. And now looking at
17 the -- and when you're ready --

18 A. I'm ready.

19 Q. Looking at least change plans, your analysis is
20 that Cooper's least change plan 1 keeps 92.4 percent of
21 Mississippians in the same district as the existing
22 plan?

23 A. Yes.

24 Q. And in least change 2 plan, taking 95.8 percent
25 of Mississippians in the same plan as the existing plan?

1 A. Yes.

2 Q. And your analysis is: "The changes in Cooper's
3 least change plans are 'minimal and not substantially
4 differentiated by race and ethnicity'?"

5 A. Yes, I recall that.

6 Q. So you would if that somebody wanted to
7 prioritize core retention, Cooper's least change plans
8 would demonstrate that this can be done while creating a
9 majority black voting age population supreme court
10 district 1?

11 MR. WALLACE objection to the -- objection to
12 the vagueness of "someone," but he can answer the
13 question.

14 A. That appears to be the case.

15 Q. And you have no basis to think that core
16 retention is, in fact, a consideration that a
17 Mississippi map drawer would consider?

18 MR. WALLACE: Objection. Once again, the
19 only map drawer of -- the only map drawer of Mississippi
20 supreme court districts in the last 200 years is the
21 legislature. But he may answer.

22 A. I -- I don't know.

23 Q. And just stepping back, do you think it would
24 make sense to consider core retention in drawing -- in
25 redrawing districts that haven't changed for 35 years?

1 MR. WALLACE: Objection to the vagueness of
2 makes sense, but he may answer.

3 A. It's a principle regardless of how long they've
4 been around. If you think, you know, these people have
5 something in common to politicians or whatever the case
6 may be that they're voting for, used to going certain
7 places, yeah.

8 Q. When you say "used to going certain places,"
9 what do you mean?

10 A. Well for example, if you're going to go vote,
11 you know, where the voting place is going to be and
12 things like that.

13 Q. The supreme court lines don't affect where your
14 polling place is, do they?

15 A. Well but you're -- if you're now in a new
16 district, that's what I'm getting at, now where your
17 vote is in a different district might be the case.

18 Q. You mean, you wouldn't vote --

19 A. If you're moving --

20 Q. Your ballot would reflect a different district?

21 A. Yeah, that's what I'm getting at. And it might
22 be that you're not accustomed to people who are running
23 in that district, you don't know the history, things
24 like that; where as in the district you were in, you
25 would. Just bring that up as a possibility.

1 Q. Looking at paragraph 68 of your report on page
2 36, you opine that your core retention analysis shows
3 that illustrative plans -- "shows that illustrative
4 plans 1 and 2 are significantly disruptive to large
5 numbers of Mississippians across the state in order to
6 achieve small increase in the percent APB in district 1.

7 A. Correct.

8 Q. So in addition to creating -- in addition to
9 increasing the percent APB in district 1 the changes in
10 illustrative plans also decrease the level of population
11 imbalance between the districts from the existing plan;
12 right?

13 MR. WALLACE: Objection as out of time. He
14 may answer it.

15 A. I believe that was the case, yes.

16 Q. And in addition to increasing the percent APB
17 in district 1, it changes in the illustrative plans,
18 also maintains a system with zero county splits and zero
19 precinct splits; right?

20 A. That's correct.

21 MR. WALLACE: Same objection.

22 Q. And in addition to achieving small increases in
23 the percent APB in district 1, the changes in
24 illustrative plans also ensure that there are fewer
25 planning district splits right?

1 MR. WALLACE: Same objection and relevance
2 but he may answer.

3 A. That appears to be the case.

4 Q. And in addition to achieving small increases in
5 the percent APB in district 1, the changes in the
6 illustrative plans also unite the Mississippi Delta as a
7 communities of interest in the single supreme court
8 district; right?

9 MR. WALLACE: Same objection, but he may
10 answer.

11 A. If the entire Mississippi Delta is a single
12 community of interest that's a research question that
13 needs to be answered.

14 Q. And assuming it is, then the answer to my
15 previous question is yes?

16 A. If -- if that proved to be the case, that there
17 were enough commonalities to say that it is a community
18 of interest, it would be the case.

19 MR. SAVITZKY: So I want to talk about your
20 cluster analysis next. And I would be, you know,
21 just -- just stepping out of the questioning for a
22 second and in terms of our timing, I would be happy to
23 continue on discussing the January report and the sort
24 of mapping elements and then break and then discuss
25 voter turnout. But if you folks would like to take a

1 break earlier, we can stop here -- we're at the next
2 stopping place -- or any other time.

3 MR. WALLACE: Whatever is convenient for
4 Dr. Swanson. We've been going over three hours, but I'm
5 fine, we can break now or later, take your pick.

6 THE WITNESS: So when would the break about
7 if it's not now?

8 MR. SAVITZKY: Could be in 20 minutes, in 40
9 minutes, an hour.

10 THE WITNESS: I prefer to do it now.

11 MR. SAVITZKY: Okay. That's why I asked.
12 So let's go off the record, then.

13 (A break was taken from 12:07 to 1:03 p.m.)

14 MR. SAVITZKY: Back on the record.

15 BY MR. SAVITZKY:

16 Q. Hope you had a good lunch, Dr. Swanson.

17 A. It was.

18 Q. Okay. And you and Mr. Wallace didn't talk
19 about the substance of the case during lunch?

20 THE WITNESS: Did we talk about the
21 substance of the case?

22 MR. WALLACE: I --

23 A. We had a long conversation and parts of it were
24 about things like that, but it was like a substantive
25 conversation, so what do you mean by a substantial

1 conversation?

2 Q. Without get into the details of your
3 conversation, I just want to make sure there weren't any
4 sort of instructions about testimony or --

5 A. Oh, no.

6 Q. -- talking about the sort of -- about the
7 deposition?

8 A. No. He said -- the only thing he said to me,
9 said to answer questions as truthfully as you can.
10 That's about the instruction level I got.

11 Q. Noted. And I didn't want to elicit any
12 specific -- that is good advice.

13 MR. WALLACE: We talked a lot about his
14 Indian cases. If you want to talk about those, they're
15 probably in his CV too.

16 MR. SAVITZKY: They are in the CV, but I
17 don't want to get into them. All right.

18 BY MR. SAVITZKY:

19 Q. So I think what we were -- we were just on the
20 cluster analysis. So sticking with the January report
21 which you should still have in front of you, I'd like to
22 go to page 29 -- or excuse me, page 14, paragraph 19.
23 And before we get into the cluster analysis, just more
24 generally -- tell me when you're on paragraph 29.

25 A. Yeah.

1 Q. So you say in paragraph 29: "Compared to the
2 U.S. as a whole, Mississippi is not as diverse in terms
3 of race and ethnicity." Do I have that right?

4 A. Correct.

5 Q. And what do you mean when you say "diversity"?

6 A. The majority racial groups in Mississippi are
7 black and white. And if you look at ethnicity -- and
8 you understand the way the census bureau uses ethnicity
9 as opposed to race; correct?

10 Q. Yes.

11 A. So the ethnic distribution is not what you'd see
12 in a lot of other states as well.

13 Q. So your point is that Mississippi is 36 percent
14 black, 56 percent white, relatively low percent of
15 Hispanic folks, so the vast majority of the population
16 is either black or white?

17 A. Correct.

18 Q. And where does that definition of diversity
19 come from?

20 MR. WALLACE: Let me -- asleep at the switch
21 while I was drinking my coffee. This is all outside of
22 the court's order. And with that objection, he may
23 answer.

24 Q. And where do you get that definition of
25 diversity?

1 A. Racial diversity is a common one, start looking
2 at what the distribution is of people by race.

3 Q. Well, would it be fair to say that if we
4 measured diversity by the percentage of nonwhite people,
5 non Hispanic white people, Mississippi would be one of
6 the more diverse states?

7 A. If all you're looking at is two racial groups,
8 if you categorize and collapse everything into white and
9 nonwhite.

10 Q. Yes.

11 A. Then it would be a different story.

12 Q. And looking at things that way, Mississippi
13 would be one of the more diverse states in the country?

14 A. Yeah. I -- I have trouble looking at diversity
15 from the standpoint of two categories. I would use the
16 term "distribution" rather than "diversity."

17 Q. How would you use the term "distribution"?

18 A. Well, distribution. So if you flip a coin, is
19 it 50:50 or is it an unbiased or a biased coin so it's
20 60:50? So diversity in my head does not mean that
21 you're looking at what is the distribution between two
22 possible categories. Diversity to me means there's more
23 than one or two categories. Do you follow me?

24 Q. I do. And so your metric of diversity is how
25 many different categories are represented in the extent

1 to which the population is distributed among many
2 different categories?

3 A. Thank you.

4 Q. Is that accurate?

5 A. Yes. That's more accurate than I think looking
6 at just two classes of whatever they might be.

7 Q. Well, whether or not it's more accurate, that's
8 your definition of diversity?

9 A. Yes.

10 Q. And if we were to define diversity as what is
11 the percentage of people who are from racial and ethnic
12 minority groups, then Mississippi is one of the more
13 diverse states?

14 A. Then that would be your definition. And that
15 what you just said, if we were to define it, so you
16 could define it that way.

17 Q. And I know that --

18 MR. WALLACE: And let me object to form.
19 Isn't somebody, everybody from a racial or ethnic group?

20 MR. SAVITZKY: Minority groups.

21 MR. WALLACE: Oh, okay.

22 BY MR. SAVITZKY:

23 Q. So -- and as someone who studies demographics,
24 reads about demographic issues, would you agree that
25 colloquially when people talk about the word

1 "diversity," they're generally referring to the amount
2 of people with the presence of members of racial
3 minority groups?

4 MR. WALLACE: Objection to the vagueness and
5 irrelevance of colloquiality in a law court, but he may
6 answer.

7 A. I'm not sure what they'd say in terms of
8 diversity in terms of colloquially. It probably varies
9 from region of the U.S. to another region. It certainly
10 would be probably very different in Hawaii than it would
11 be in Hawaii as opposed to in Mississippi or elsewhere.
12 So I'm not sure what to say in terms of a general
13 statement about that.

14 Q. And looking at Exhibit 10, Mr. Cooper's
15 rebuttal report at paragraph 36. And let me know when
16 you're there. Do you see it?

17 A. I do.

18 Q. And do you dispute his assertion that: "As
19 defined by the percentage of the state level population
20 that is not non Hispanic white, Mississippi is the 12th
21 most racially diverse state in the nation?"

22 MR. WALLACE: You know, objection as to
23 being out of time, but you may answer.

24 A. I just would not use the term "diversity" in
25 that sense. He can, you know, and he says that whatever

1 the ranking is and whatever he's computed it on, it's
2 the 12th most racially something in the -- I just
3 wouldn't use the word "diversity."

4 Q. And so you would not dispute his assertion
5 that "as defined by the percentage of the state level
6 population that is not non Hispanic white," using that
7 definition of diversity, "Mississippi is the 12th most
8 racially diverse state in the nation?"

9 A. Well, I don't know if it's the 12th most or
10 not. That's another thing I would have to look up, so I
11 don't know the answer to it.

12 Q. So you're not disputing it?

13 A. Well, I can't say yes or no. You're asking me
14 to state -- agree with the fact that I'm not sure if
15 it's 12th most racially diverse state in the county.
16 And what year? Are we talking about the 2020 census?
17 The ACS? I mean, there's a lot of places you could
18 measure this from. I'm not trying to be obstructive,
19 but I'm just saying, you know, it's hard for me to
20 answer the statement just off the top of my head like
21 that.

22 Q. And, I mean, looking at the paragraph, I think
23 Mr. Cooper says that it's looking at census data?

24 A. Well, it couldn't be 2020 census data, was it?
25 I -- you know, I'm just asking.

1 Q. Yes, 2020 census data.

2 A. So he had 2020 census data when he wrote this
3 report?

4 Q. Yes.

5 A. Okay.

6 Q. The report from October of 2022.

7 A. Okay. I mean, and it could be the case. A lot
8 of information wasn't released that soon, but I'm -- I
9 don't know. But the point is, I don't know if it's the
10 12th most diverse state in terms of whatever measurement
11 you've got or not because I don't know the source of his
12 data, I don't -- I haven't looked at a ranking like
13 that, so it's -- I can't answer the question. I cannot
14 give you an opinion on it.

15 Q. Have you ever seen your definition of diversity
16 used as a consideration in the electoral districting
17 context?

18 MR. WALLACE: Objection. I think it's
19 asking for a legal opinion, maybe it's a legal fact.
20 But I will allow him to answer.

21 Q. I'm asking, to be clear, what you have
22 personally seen in your life and work in this area.
23 Have you seen this definition of diversity that you
24 proffered used in the electoral districting context?

25 A. I don't know.

1 Q. You can't recall any instance of it as you sit
2 here?

3 A. No, I can't recall.

4 Q. Does any source that you are aware of as
5 someone who's being proofed as an expert in this case
6 indicates that your definition of diversity is a proper
7 consideration in the electoral districting contest?

8 MR. WALLACE: Same objection, but he can
9 answer it.

10 A. So is it -- repeat that one again.

11 Q. Well, let me ask it this way. We looked at
12 that National Conference of State Legislatures report
13 that you relied on?

14 A. Okay.

15 Q. And we looked at that congressional research
16 service report that you relied on; right?

17 A. Yes.

18 Q. And we looked at that redistricting monograph
19 that Mr. Bryan and Morrison wrote?

20 A. Yes.

21 Q. And did any of those sources indicate that your
22 definition of diversity is an appropriate consideration
23 in the electoral districting context?

24 A. Not that I recall.

25 Q. And are you aware of any other sources that

1 indicate that your definition of diversity is an
2 appropriate consideration for the electoral districting
3 context?

4 A. Not that I recall.

5 Q. So if a map drawer -- and I'm asking you this
6 not as a legal conclusion but as someone who's being
7 proffered as an expert in this case -- if a map drawer
8 were to optimize for this definition of diversity that
9 you've laid out there, that would mean they would want
10 to spread the black population among the three
11 districts, right, so that they were maximally -- each
12 district was maximally diverse according to your
13 definition; right?

14 MR. WALLACE: I adopt your objection to your
15 own question. He can answer it.

16 A. If you're looking at just a race, that's one
17 way you could do it, but there's other dimensions to
18 population composition beyond race.

19 Q. Fair enough. And so if a map drawer were
20 trying to optimize for racial diversity which is what
21 you were talking about when you said that Mississippi is
22 not as diverse in terms of race and ethnicity, if you
23 were trying to optimize for racial diversity, you would
24 spread the black population among the different
25 districts?

1 MR. WALLACE: Same objection. He may
2 answer.

3 A. You mean in the sense of someone -- like you
4 said, a map drawer is trying to do something and looking
5 for diversity, and all you're looking at is black versus
6 one other racial category.

7 Q. Yeah. Or if you're using your definition of
8 diversity to draw districts in Mississippi, if you were
9 trying to implement that definition and optimize for
10 racial diversity, you would spread the black population
11 across the districts so that all of them had black
12 population in them; right?

13 A. Well, if you're just simply looking at the
14 categories, again, of where I told you white and black,
15 to me that's -- if you're using two categories, it's not
16 a good example of the use of the word "diversity." So
17 you'd want to -- I'd introduce more elements than just
18 black -- distribution of the black population or the
19 white population or the Chinese population across all
20 the countries in Mississippi.

21 Q. So would you say that your definition of
22 diversity or at least with respect to racial diversity
23 is not really something that an electoral map drawer in
24 Mississippi should factor in?

25 MR. WALLACE: Same objection as before.

1 A. I don't know. It depends on the task, I guess.
2 I don't know. I can't speak for other map drawers or
3 any map drawers. I don't know.

4 Q. Well speaking for yourself and a person who's
5 offering expert opinions about the qualities of
6 electoral maps in this lawsuit, are you saying that
7 one -- that you would consider the racial diversity of
8 different districts in evaluating the districting plans?

9 A. Along with other measures of diversity, other
10 measures of how human beings vary.

11 Q. And if you were optimizing for that definition
12 of racial diversity that you described, that would mean
13 drawing three black minority districts; right?

14 A. Again, I stress that I'm not looking at it just
15 in terms of race. So when looking at the human -- you
16 know, the composition of the population, you're looking,
17 as I did, beyond race and what diversity might
18 represent.

19 Q. So you don't think it's a good idea to look at
20 racial diversity as you've described it?

21 A. I didn't say that. I said I would look at
22 things beyond that if I'm looking at diversity.

23 Q. You wouldn't look just at racial diversity?

24 A. That's correct.

25 Q. Okay. So let's -- and just -- let's go to

1 paragraph 31, which I think we're basically on in your
2 report, your January report, excuse me. This is pages
3 15 into 16. Just briefly, you know that the supreme
4 court districts are also the districts that are used for
5 various other elective and appointive offices in
6 Mississippi; right?

7 A. I do.

8 Q. And what's the relevance of that in your
9 opinion as someone who's being proffered as an expert in
10 this case?

11 MR. WALLACE: Objection to the extent you're
12 asking him for a legal opinion on relevance, but he may
13 answer.

14 A. They're important in the sense that they --
15 that those districts determine a lot of other issues
16 that go on in the state like the institutes of higher
17 learning and appointments of boards and the bar and the
18 bar exam board.

19 Q. Is it your opinion that having one of the three
20 supreme court districts be majority black voting age
21 population would decrease diversity in state government
22 in Mississippi?

23 MR. WALLACE: Again, objection as outside
24 the scope of the court's order, but he can answer.

25 A. And again, I'd stress that my answer is, it's

1 beyond race and it's not just affecting the government
2 in Mississippi. So I think it's important in that
3 regard whether I was going to use diversity of the
4 population measuring a lot of dimensions.

5 Q. And just on this point, you're not saying,
6 you're not opining that having one of the three supreme
7 court districts be majority black would decrease
8 diversity in state government?

9 A. I don't know the answer to that question. I
10 don't know if diverse -- when you say diversity in state
11 government, people who work for the state? What's the
12 question you're asking?

13 Q. People who are appointed to -- I mean, you --

14 A. Okay.

15 Q. We're talking in reference to these various
16 appointed and elected offices.

17 A. Okay. So you're talking about the appointive
18 offices, not people who are necessarily employees of the
19 State of Mississippi; right?

20 Q. Right. With respect to those offices that you
21 mentioned in this part of your report, you are not
22 opining that the occupants of those offices will be less
23 diverse if one of the three districts is majority black?

24 A. I don't know the answer, yeah, and I haven't
25 opined on that, and I'm not in a position to do that

1 now.

2 Q. Now, you mentioned The Institute of Higher
3 Learning, and I believe you note in your report that the
4 12-member body that's appointed by the governor of
5 Mississippi, 4 members for each of the three districts?

6 A. I believe that's correct. I'd have to look in
7 my record, but I believe that's correct.

8 Q. Yeah, you say: "In regard to IHL, 4 of the
9 12-member board of trustees for the state IHL are
10 appointed by the governor from each of the three supreme
11 court districts." Do I have that right?

12 A. You do.

13 Q. And you say in paragraph 31, and you mention
14 this again later as well, you say: "The board has a
15 diversity statement."

16 A. It does.

17 Q. And you cite Section 102.06 of the board's
18 policy manual, and you say it acknowledges the value of
19 the diversity for Mississippi.

20 A. Yes.

21 MR. SAVITZKY: And we'll just mark that.
22 Copy for you, copy for Mr. Wallace.

23 MR. WALLACE: What number?

24 MR. SAVITZKY: This is going to be -- oh.
25 Dr. Swanson, could I please that have back? Thank you.

1 I was quick on the draw there. Here you go, No. 17.

2 BY MR. SAVITZKY:

3 Q. This is the IHL board of trustees' policies and
4 bylaws that you reference in your report. And then
5 looking at pages 14 and 15 of this document, we see the
6 diversity statements that you reference there. Let me
7 know when you're there and confirm that that's the
8 diversity statement that you're referencing?

9 A. I'm there.

10 Q. Okay. And looking at this statement and
11 especially looking at on page 15, you would agree that
12 the board here adopts a set of goals for higher
13 education in Mississippi --

14 A. Yes.

15 Q. -- related to diversity?

16 A. Yes.

17 Q. And the goals they adopt are: "One, to
18 increase the enrollment and graduation rate of
19 underrepresented students at our institutions"?

20 A. Yes.

21 Q. "Two, to increase the employment of
22 underrepresented individuals in administrative faculty
23 and staff positions?"

24 A. Yes.

25 Q. "Three, to enhance the overall educational

1 experience through infusion of curricular content and
2 cocurricular programming that enhanced multicultural
3 awareness and understanding?"

4 A. Yes.

5 Q. "Four, to increase the use of unrepresented
6 professionals, contractors, and other vendors?"

7 A. Yes.

8 Q. Fair to say that the diversity goals adopted by
9 IHL focus on representation for "underrepresented
10 individuals"?

11 A. Yes.

12 Q. Not necessarily on -- strike that.

13 In your view, is anything about these goals
14 diminished by changing the supreme court district so
15 that one of them is majority black voting age
16 population.

17 A. I don't know the answer to that question.

18 Q. Do you offer any opinion that these goals,
19 these diversity goals, would be diminished in any way by
20 having one of the supreme court districts be majority
21 black?

22 A. Are you talking about the four points that's
23 you just raised?

24 Q. Yes.

25 A. I don't know the answer to that.

1 Q. You don't offer an opinion on that?

2 A. Not at this point in time.

3 Q. And you can put that one aside right in this
4 pile here.

5 And now let's talk about your cluster
6 analysis going to paragraph 90 of your report, not page
7 90 --

8 A. I understand.

9 Q. -- which I just turned to. All right. So
10 beginning at paragraph 90 of your report, your January
11 report, you conduct what you call a diversity
12 evaluation; right?

13 A. I do.

14 Q. And you base that on what you call a cluster
15 analysis; right?

16 A. Correct.

17 Q. And you say that you conduct this cluster
18 analysis to evaluate the issue of population diversity?

19 A. Socio and economic diversity is in that too.

20 Q. Well just looking at that first paragraph 90,
21 the last sentence, you say --

22 A. Population diversity, correct.

23 Q. Right. And to do the cluster analysis, you
24 took county level data on a number of the different
25 indices of health and wellbeing from the 2017

1 Mississippi Health & Hunger Atlas?

2 A. I did.

3 Q. And before we talk about that, why didn't you
4 use ACS data?

5 MR. WALLACE: All right. Now that you've
6 asked a question, I'm going to ask -- I'm going to
7 object to that as being outside the scope of the Court's
8 order, but he may answer it.

9 A. It's a consistent set of data which may or may
10 not include some census bureau data in there that goes
11 beyond what you can get from the ACS.

12 Q. Oh, it includes --

13 A. It may or may not.

14 Q. -- the ACS data?

15 A. It may or may not. I'd have to go back and
16 look, but I'm sure it has census data of some sort in
17 there somewhere, but I have to go back and look and
18 refresh my memory.

19 Q. Was there a more recent version of the
20 Mississippi Health & Hunger Atlas available?

21 A. Not when I contacted people at Ole Miss. I
22 got --

23 Q. And you got -- I'm sorry. Please finish.

24 A. I got it from people at Ole Miss, my former
25 colleagues.

1 Q. And as far as you know, they gave you the most
2 recent version?

3 A. The only version as far as I know.

4 Q. So you say -- and I think this is in
5 paragraph 93 of your report on page 37, you say:
6 "Health and hunger are correlated with socioeconomic
7 status which in turn in correlated with race." Is that
8 right?

9 A. Correct.

10 Q. And so in your view, the health and hunger
11 indices also serve as indices of race and socioeconomic
12 status?

13 A. They're --

14 MR. WALLACE: Same objection. He may
15 answer.

16 A. They're correlated.

17 Q. Okay. And just looking at the last sentence of
18 this paragraph, you say: "These correlations support
19 the argument that the health and hunger indices also
20 serve as indices of race and socioeconomic status."

21 A. Correct, right.

22 Q. And just in layman's terms, is your point that
23 black Mississippians are worse off in terms of health
24 and hunger and other socioeconomic metrics than white
25 Mississippians?

1 MR. WALLACE: Same objection. He can
2 answer.

3 A. It was my point that any group is better or
4 worse off in terms of that, just some groups may be
5 higher in some indices and other ones lower in other
6 indices. That's my point.

7 Q. What do you mean when you say that: "The
8 health and hunger indices also serve as indices of race
9 and socioeconomic status"?

10 A. Well then in that case, generally speaking,
11 that if you're -- if you score low on one dimension,
12 you're probably going to -- it's going to be correlated
13 with a low score in another dimension.

14 Q. So -- and specifically, if you score low on the
15 health and hunger indices in that data you looked at,
16 you would also be likely to score low on other
17 indicators of socioeconomic status?

18 A. Yes.

19 Q. And you would also be more likely to be black?

20 A. It depends on the part of the state you're in.
21 There may be parts of the state where you have rural
22 white folks, for example, that would probably score
23 similarly if -- where you're looking at different parts
24 of state. But yeah, in general, I'd say you're probably
25 more likely to be black.

1 Q. Let's talk about how you created these indices.
2 And I'm looking, for reference -- you can do too if you
3 want, but I'll ask you questions and see if you want to
4 look. I'm looking, for reference, at page 48 in your
5 report in Exhibit III.H.1. To create your need index,
6 you use nine different health need indicators like teen
7 pregnancy and adult obesity; is that right?

8 A. This is what the people did who put the Hunger
9 Act list together, they -- the need indicators, this is
10 what they created, not me.

11 Q. Okay. So you used the indices sort of fully
12 formed as provided to you in the Health & Hunger Atlas?

13 A. Correct.

14 Q. Okay. So you used a need index from the Health
15 & Hunger Atlas that includes nine different health need
16 indicators like teen pregnancy and adult obesity?

17 A. I'd have to look to see exactly which ones I
18 used, but in general these were the variables that were
19 available to use as they categorize them from the
20 report. But I don't recall which ones, if all of them I
21 used or some that were specific. So we need to go
22 through that.

23 Q. Well, let me ask you this: Do you know how
24 these different indices were constructed by the folks
25 who put together the Health & Hunger Atlas?

1 A. They wrote it up in the hunger atlas, and I
2 don't recall off the top of my head what they said. I'd
3 have to go back and review the atlas.

4 Q. And do you know the source of the different
5 metrics that they include in these indices?

6 A. You'd have to go back and look at the -- it's
7 in there. They have it documented.

8 Q. Do you know that the sources that they used for
9 these indices are reliable?

10 A. My general impression in my memory based on the
11 work they did and the people who did it, I don't think
12 they would pick indices and data that were from sources
13 that were not reliable. But if you're asking if I went
14 back and independently verified it for myself, I didn't.

15 Q. Do you know why they created this particular
16 index of metrics?

17 A. I think it has to do with looking up
18 Mississippi. So again, if you -- you need to look at
19 their report to see what they say in terms of what the
20 goals exactly of the report were.

21 Q. And so you actually use a number of indices.
22 You have a need index, you also have a hunger -- sorry,
23 you have a health need index, and you also have a hunger
24 need index ; right?

25 A. Well when you say I have, those, again, are how

1 they classified the indicators they used. So I would
2 say those -- this is a description of what they have in
3 the report and how they categorized it.

4 Q. So you used the Health & Hunger Atlas's need
5 index and its hunger -- or excuse me, their -- yes,
6 their need index -- their health need index, excuse me,
7 and their hunger need index, you used both of those for
8 your diversity analysis?

9 A. Yes. I'd have to go back and see if I actually
10 pulled off the individual elements of each index or used
11 the index, because I don't recall off the top of my head
12 what I did. Do you follow me? I can't recall now that
13 if I used the index in itself or if I used the
14 individual indicators in there as part of the cluster
15 analysis.

16 Q. So you don't know whether you used all the
17 different indicators that are listed here?

18 A. As I said, the last time I read this report was
19 months and months ago, so I've haven't thought about it
20 until today when you started asking me questions on it.
21 So I need go back and look at how I aggregated. So the
22 basics of that, I -- I would need to go back and review
23 what I did for it to see what's in there.

24 Q. You say: "These two indices form the input for
25 the cluster analysis."

1 A. Okay. Then -- then that's what it has, these
2 two indices. Where are you at?

3 Q. I'm looking the second to the last sentence in
4 paragraph 94.

5 A. Then that's what I did.

6 Q. And when you say "these two indices," you're
7 referring to the need index which includes both health
8 indicators and hunger indicators, and the second one is
9 the performance index which includes health and hunger
10 indicators; right?

11 A. Yes.

12 Q. And so you took all these different indicators
13 from these two indices, and those are the inputs for
14 your cluster analysis?

15 A. Well, let's look at Appendix 2, because it says
16 I list them in Appendix 2. J.

17 Q. And that would be starting at page 94 of your
18 report? Excuse me, page 93.

19 A. Thank you.

20 Q. Yep.

21 A. Now I can see it. Yeah, I used their indices
22 in need and the performance indices. Thank you.

23 Q. And again, you didn't select these different
24 indicators, you just used the two indices that the
25 Health & Hunger Atlas people put together?

1 A. That's correct.

2 Q. Someone could have selected a different set of
3 indicators to measure health and hunger in Mississippi?

4 A. Well if there are data available, I guess they
5 could have and want to construct it.

6 Q. You could have constructed one out of ACS data?

7 A. I don't think you're going to get SNAP
8 enrollment and primary care physicians for 100,000
9 food-insecure individuals, you know, whatever else may
10 be in here that's necessarily in ACS data. You may or
11 may not. But if you did, you'd have to go to a lot of
12 different reports to find it. And if that's what you're
13 asking me, and you may end up having to use ACS data
14 from different time points.

15 Q. And to be clear, I'm not trying to knock you
16 for, you know --

17 A. Yeah, I understand.

18 Q. -- for not doing that, I'm just -- I want to
19 make sure this isn't the one definitive set of
20 indicators that one could use to measure health and
21 hunger, this is the one that the Mississippi Health &
22 Hunger Atlas people happened to choose; right?

23 A. That's correct. And relates directly to
24 Mississippi. And in that sense, it was convenient in
25 the sense that it's all assembled in one place and

1 relates to the State of Mississippi?

2 Q. Now, how does this -- how do these indicators
3 help you measure population diversity?

4 A. From the correlations that I described there in
5 the report. If you go back to what you just read
6 about --

7 Q. Well --

8 A. -- in paragraph 93.

9 Q. Uh-huh. So when you say population diversity,
10 you mean diversity with respect to health and hunger
11 needs and issues?

12 A. And they're correlated with other forms of
13 diversity such as race and socioeconomic status.

14 Q. And you say that this analysis: "Enables us to
15 understand the geographic distribution of population
16 diversity beyond the raw percent any part black for each
17 county."

18 A. Yes.

19 Q. So doesn't it only enable us to understand the
20 geographic distribution of this particular definition of
21 diversity that you've constructed using the
22 Health & Hunger Atlas indices?

23 MR. WALLACE: Object to the form as being
24 outside of the scope of the court's order, but he may
25 answer.

1 A. And to the extent, again, that they're
2 correlated with these other socioeconomic indicators
3 including race, I would say they represent a reasonable
4 index for doing that.

5 Q. And your unit of analysis in conducting this
6 cluster analysis is the county; right?

7 A. Correct.

8 Q. So what you're seeing is the distrubution of
9 high or low need counties among the different districts;
10 right?

11 A. Correct.

12 Q. So I think you'd agree with me that there are
13 some counties in Mississippi that are small in
14 population and some that are very large in population;
15 right?

16 A. The needs -- I think you'd have to took at the
17 report again, and I don't believe they're biased by the
18 number of people in the county, I believe the need
19 indicators are set up, and you can see it in here where
20 they're talking about percentages and rates. So in a
21 sense you're trying to be dimensionalist, you're
22 certainly going to have a lot more people one category,
23 say, in Hinds County than you would in some other
24 smaller county. But when you start looking at things
25 like rate, it means they're trying to be dimensionalist.

1 Q. But I guess my point is just in terms of what
2 we can take from your analysis, it doesn't speak to the
3 distribution of population across the districts, it
4 speaks to distribution of counties with certain
5 characteristics across the districts?

6 A. It speaks to the distribution of these
7 indicators across counties, and what that speaks to
8 going beyond the -- back to paragraph 93 is the
9 correlation that they have with socioeconomic and racial
10 categories.

11 Q. Now, you could have designed some cluster
12 analysis that looks at the distrubution of population;
13 right?

14 A. How would you do that? Could you give me an
15 example?

16 Q. Looking at the number of people with particular
17 health needs or hunger needs?

18 A. Well that's what this does, but it looks at,
19 again, rates not numbers, so attempts to make it
20 dimensionalist so you're not affected by what the
21 population size is in a given county.

22 Q. Right. And you -- but you could have looked at
23 the number of people as opposed to the rates that you're
24 seeing in the particular need?

25 A. Well, the number if people would be affected by

1 the population counts in the counties then.

2 Q. Right. But your analysis looking at the
3 distribution of the counties of particular rates doesn't
4 indicate whether one supreme court district has a very
5 large county with high need and therefore there are more
6 unhealthy or hungry people in that district?

7 MR. WALLACE: Object as being out of the
8 time and argumentative, but you may answer.

9 A. Yeah. Well my take is if you're looking at an
10 index of need, it's indicating need. And I think that
11 my take on reading the report that the folks put
12 together is that they did a good job of putting those
13 things together. They had good arguments. And I would
14 direct you to go read their report to see whether or not
15 you think it's reliable.

16 Q. And so in terms of the analysis you did, you
17 sort of grouped counties together into three groups,
18 high need, high performance, which means there's a lot
19 of health and hunger need, but also fairly strong access
20 to services or resources; is that --

21 A. Correct.

22 Q. -- right?

23 A. Correct.

24 Q. And then you have a medium need, medium
25 performance group, and that's about half the counties in

1 the state fall into that group?

2 A. Correct.

3 Q. Fair to say those counties are maybe a little
4 bit better off in the sense that somewhat less health
5 and hunger need?

6 A. Than in cluster 3, the high need, low
7 performance.

8 Q. And that's what I was getting to.

9 A. Yeah.

10 Q. You also have the high need, low performance
11 set of counties which means there's a lot of health and
12 hunger need, but not a lot of resources or access to
13 resources. Do I have that right?

14 A. You do.

15 Q. So those counties are the worst off?

16 A. Yes.

17 Q. And just looking at that map on page 50 of your
18 report, those high need, low performance counties are in
19 purple; is that right?

20 A. Yes.

21 Q. And fair to say that many of them are in the
22 Mississippi Delta?

23 A. Well, let's count them up. If you're -- when
24 you say "many," you mean a majority or --

25 Q. Looks like about half. You can count them.

1 A. Well if you count Tunica, Coahoma, Washington,
2 they're -- those are definitely -- Bolivar, Sharkey,
3 Issaquena, those are definitely Delta counties, correct?
4 They're not there. So I'm not sure it's even half, but
5 it's somewhere around that number.

6 Q. And then the balance of your analysis is
7 basically looking at the distribution of these counties
8 in each of the supreme court districts; right?

9 A. Correct.

10 Q. And so looking at page 52 of your report,
11 Exhibit III-H-3X-c which is a little bar chart at the
12 bottom, you show that about half of the high need, low
13 performance counties are in district 3 under the
14 existing --

15 A. Yes.

16 Q. -- map. And then the other half are divided
17 between districts 1 and 2?

18 A. Yes.

19 Q. And again, because what you're doing is looking
20 at the percentage of counties in each district, the
21 counties you used in the analysis -- and some counties
22 are larger than others, we don't actually know whether
23 district 3 or district 2 or district 1 has more hungry
24 or unhealthy people in it compared to the other --

25 A. Well, if you did that comparison, as I answered

1 you before, you're obviously going to have, given that
2 all else is equal, in a county with a larger population,
3 you're going to have more in that county of a particular
4 characteristic. Hence, they used rates in an attempt to
5 make it dimensionalist so it is comparable. Is the rate
6 higher in one county or another regardless of the
7 population size.

8 Q. But I guess my question is, you know, the unit
9 of analysis here is the county --

10 A. Yes.

11 Q. -- but now you're looking at the distribution
12 of counties in the supreme court districts and making
13 what I understand to be a statement about the population
14 diversity in the supreme court districts; right?

15 A. That would be correct. But in this sense what
16 you're looking at are the dimensionalist rates that
17 represent those populations. So if you look at it from
18 the standpoint of where are needs the highest and the
19 performance the lowest, and you center correlated again
20 with socioeconomic status and race, that's what you're
21 looking at with maps.

22 Q. And I guess what I'm trying to understand is,
23 looking at the existing plan, you see about half of the
24 counties you identified as high need and low performance
25 in district 3, but if they're all very small counties;

1 and meanwhile district 1, you have a smaller percentage
2 of those counties, but Hinds County's in district 1. It
3 may be that there's more health and hunger need in
4 district 1?

5 A. Well there's always going to be a higher need
6 in a county that has a higher population. That's not
7 what I looked at.

8 Q. But the supreme count districts have not equal
9 but similar populations?

10 A. I hear what you're saying. And what this does
11 is look at it from a similar perspective. When you're
12 looking at the rates across there, okay, what --
13 regardless of what population size is, what do the rates
14 look like at a county level?

15 Q. Well, couldn't you aggregate the counties and
16 actually look at the rates among the population as a
17 whole?

18 A. Let's see. Why would I do that?

19 Q. So that you can compare the populations of the
20 different districts. If I want to look at teen
21 pregnancy or obesity rates or SNAP rates, I could
22 aggregate the information for each county up to the
23 district level, and I could see which of these districts
24 has higher rate of SNAP use.

25 A. Now I see what you're getting at. Okay. So

1 yeah, if I had the data. And I didn't have the raw data
2 to be able to do that with the data are and the report
3 are given rates by county. So without knowing what all
4 the numbers are in there, I'd have to go reconstruct and
5 put them up at the district level. That's what you're
6 asking --

7 Q. Yes.

8 A. -- and I didn't do that.

9 Q. And you didn't do that?

10 A. That's correct.

11 Q. So -- and without doing that, you can't speak
12 to the similarity or difference of the districts in
13 terms of those different metrics?

14 MR. WALLACE: Objection. Same objection as
15 before and objection as to vagueness, can't speak to the
16 differences, did you say? I'm -- I lost your meaning.

17 A. I think I follow your meaning. But the point
18 is, I looked at counties.

19 Q. So --

20 A. And if you reaggregate the lines by county,
21 you're starting to see from the county perspective what
22 the numbers are by that is you can tell.

23 Q. And looking at page 55, we're looking at
24 illustrative plan 1, same bar chart. And you say that
25 under this illustrative plan 1: "The majority of the

1 high need, low performance counties are now in district
2 1 under Cooper's illustrative plan 1."

3 A. Yes.

4 Q. And that -- again, that makes sense because as
5 we've discussed, illustrative district 1 includes all
6 the Mississippi Delta, all the counties north, south
7 along the Mississippi River, and a lot of the high need,
8 low performance counties, some of which are very small
9 in population, are in that area.

10 A. So as you asked before, it means it's
11 correlated with race and socioeconomic status, an
12 indicator of that.

13 Q. And the result -- I mean, your analysis shows
14 that what -- one of the things that Mr. Cooper's map
15 does is that more of these counties with that high level
16 of need and low level of resources are being grouped
17 together in district 1?

18 A. Correct.

19 Q. So Mr. Cooper's illustrative plan 1 is grouping
20 together counties with similar socioeconomic needs and
21 interests?

22 A. And making it less diverse.

23 Q. But you agree he's grouping together counties
24 with similar socioeconomic needs and interests?

25 A. I just said that.

1 Q. And then just same question looking at your
2 page 58, again, you're showing 69 percent of the
3 counties in that high need, low performance category are
4 in district 1 under illustrative plan 2; is that right?

5 A. That's correct.

6 Q. And again, what we're seeing is that Cooper
7 illustrative plan 2 in grouping together counties with
8 similar socioeconomic needs and interests?

9 A. Making it less diverse, yes.

10 Q. And we talked about community of interest
11 before. From a map drawing perspective -- I ask you
12 this as a person who is being proffered as an expert in
13 this case -- what do you think is more in line with
14 those districting principles that we discussed earlier?
15 What --

16 MR. WALLACE: Well, I'm -- go ahead. Let me
17 let you finish your question. I thought you had, and
18 then you kept going so pardon me.

19 Q. What do you think is more in line with the
20 districting principles we discussed earlier, grouping
21 together areas that share common needs and interests or
22 grouping areas together in a way that maximizes the
23 diversity and spread of those interests among different
24 defenses?

25 A. To answer that question --

1 MR. WALLACE: Let me get my objection in.
2 He's asking for -- first of all, he's vague; second of
3 all, he's asking for legal opinions; and third of all,
4 it's outside the scope of court's order. And having
5 said that, you may continue your answer.

6 A. As you said earlier, it -- there's a lot of
7 tradeoffs when you're looking at different metrics and
8 measurements in doing this. And that might be one of
9 the tradeoffs you're looking at.

10 Q. And having looked at some of those districting
11 principles and offered opinions about them in your
12 expert report in this case, what do you think is more
13 consistent with the principles that are reflected in the
14 Congressional Research Service Report, Redistricting
15 Manual, National Conference of State Legislatures?

16 MR. WALLACE: Same objection.

17 A. They emphasize more of the issues I think
18 you're getting at as opposed to the diversity issue.

19 Q. They emphasis grouping together areas with
20 common interests and needs?

21 MR. WALLACE: Same objection. He may
22 answer.

23 A. Yeah. And I would again go -- aren't all those
24 groupings -- again, I use them as a guideline, but
25 aren't they generally for congressional districts; is

1 that the case?

2 Q. The National Conference of State Legislatures
3 report that you cited related to considerations for
4 state legislative and other districts as well, didn't
5 it?

6 A. That -- I mean, when I say congressional,
7 that's what I meant, state and federal. I don't think
8 there's anything in there about a supreme court
9 district.

10 Q. Right. And the Redistricting Manual from
11 Morrison and Bryan, is that similarly applicable?

12 A. Well again, I -- how many -- I didn't see
13 things specifically on supreme court cases in those
14 materials, so that's why I used them as a guideline.

15 Q. And is there something about supreme court
16 districts that makes this diversity metric that you're
17 discussing more relevant than the legislature district?

18 A. Well, you read it yourself --

19 MR. WALLACE: Same objection. He may
20 answer.

21 A. You heard from the IHL, said their -- one of
22 the goals is to be more diverse.

23 Q. I mean, did anything in the IHL statement
24 describe diversity in the way that you are discussing it
25 now?

1 A. One of -- the lead-in statement before it
2 listed the four points talked about cultural diversity.
3 And so cultural diversity covers a lot of ground.

4 Q. Other than the IHL policies and bylaws that we
5 discussed, is there any other reason why this diversity
6 metric?

7 A. Well there's --

8 MR. WALLACE: Same objection. You may
9 answer.

10 A. There was the court case that I saw too on it.

11 Q. The court case that used the word "diversity"?

12 A. Yes.

13 Q. And you don't know as you sit here whether that
14 court case was using the word "diversity" in the way
15 that you mean the word "diversity"?

16 A. I do not know.

17 Q. Anything else?

18 A. Not that I can think of at this time.

19 Q. So let's talk about your analysis of polling
20 places, and turning to the paragraph 81 of your report.
21 Starting at paragraph 81, you have a voting age
22 population polling place spacial analysis?

23 A. Correct.

24 Q. And in paragraph 81 you ask: "What are the
25 differences in proximity, the differences in distance,

1 and the distance of black voting age population to
2 current polling stations compared to all voting age
3 population, and in a particular, white non Hispanic
4 voting age population." Is that right?

5 A. Correct.

6 Q. And you say: "My hypothesis for this question
7 was that if the black voting age population were being
8 systematically disenfranchised by the State of
9 Mississippi, a symptomatic indicator of that would be
10 seeing fewer of them close to polling places and more of
11 them of a greater distance from polling places."

12 A. Correct.

13 Q. How did you form that hypothesis?

14 A. Just in general knowing what propensity, close
15 to things, mean.

16 Q. Can you say more about that?

17 A. Yeah. So for example, I've done studies of
18 where graduates from high school go to college in the
19 State of Washington, and propensity is a big indicator
20 of it. So many of the freshman or transfer students who
21 go to Western Washington here in Bellingham, Washington
22 are from Western Washington, they're not from Southeast
23 Washington. Many of the students who --

24 MR. WALLACE: Did you mean "propensity" or
25 "proximity"? I'm looking at your --

1 A. Yeah, proximity. I'm sorry. Thank you. So
2 that's what I mean. So, you know, if you're close to
3 something, you're probably more likely to be able to do
4 it or go there. And there's not -- I can't cite all the
5 literature off the top of my head, but there's a lot of
6 literature, probably in marketing and a lot of other
7 fields it's that. That's one of the reasons why does
8 Target site stores in certain places.

9 Q. Would you agree the decision to leave your
10 family for the first time and go to college somewhere
11 close to home rather than far away when you're away four
12 years is a little different than whether or not you're
13 going to go vote on a Tuesday; right?

14 A. But it's a little different than deciding
15 whether you're going to go buy gasoline or clothes too,
16 but as I said, there's -- without being able to speak to
17 it all in my head, there's a lot of literature on how
18 relatively close you are to things that triggers whether
19 or not you're taking advantage or doing it. That's the
20 point. So yeah, there is a lot of variation of why
21 people are doing it, but you're close to something is a
22 determinant of whether or not you do it.

23 Q. When you put up a Target store, there's a big
24 Target logo and a big sign that says Target on it;
25 right?

1 A. As far as I know there is, yeah.

2 Q. But there isn't one on a polling place, is
3 there?

4 A. No. And I just said there's a lot of
5 differences in all these things, but the -- is the word
6 propinquity? That might be it. How close you are to
7 things is one of the determinants of whether or not you
8 take advantage or use them or don't. It's not the only
9 thing, but it's one of them.

10 Q. But you would have to know where something is
11 in order to -- in order for that logic to apply?

12 A. Well I guess you could stumble across it if
13 you're doing a random search.

14 Q. On a polling location, you'd have to stumble
15 upon it on a Tuesday in November; right?

16 A. Do they move around all the time?

17 Q. Well, that's my next question. Do you know who
18 decides polling locations in Mississippi?

19 A. No, I don't.

20 Q. So when you say that --

21 A. It's probably at the county level, but I'm, you
22 know, just saying I don't know.

23 Q. So when you say that polling place proximity
24 could be evidence of systematic disenfranchisement,
25 that's despite the fact that locations of polling places

1 is decided, you would think, at a local level?

2 A. Yes.

3 Q. And do you know whether there are racial
4 disparities in access to vehicles in Mississippi that
5 might affect the ability of Mississippians to get to the
6 polls on election day?

7 MR. WALLACE: Same objection. You may
8 answer.

9 A. There might be, but people are people, so there
10 may be different ways to overcome some of those
11 disparities.

12 Q. Well -- and just looking at Mr. Cooper's
13 responsive declaration, Exhibit 10, paragraph 34 --

14 A. In exhibit?

15 Q. It's Exhibit 10, but it's paragraph 34 of the
16 responsive declaration. I just want to make sure you're
17 looking at the responsive declaration.

18 A. That's Exhibit 9. This is 12.

19 Q. We want Exhibit 10.

20 MR. WALLACE: This one?

21 MR. SAVITZKY: You've got it.

22 BY MR. SAVITZKY:

23 Q. And looking at paragraph 34 --

24 A. Yes.

25 Q. -- Mr. Cooper says: "Statewide, 10 percent of

1 black households do not have a car versus 4.3 percent of
2 white households."

3 A. I see it.

4 Q. Do you have any reason to dispute that?

5 A. No.

6 Q. He says: "The racial disparity expands to
7 12 percent versus 4.5 percent in the Delta region." Any
8 reason to dispute that?

9 A. No.

10 Q. Do you know if there are racial disparities
11 between who has the type of job where they can get off
12 work and vote on a Tuesday in Mississippi?

13 A. I do not know.

14 Q. Based on the discussion we've had about
15 socioeconomic indicators, is it likely that black
16 Mississippians are less likely to be able to take off
17 work and vote on a Tuesday?

18 A. I'd look at it as a research question.

19 Q. Do you know whether there are racial
20 disparities in Mississippi in terms of single-parent
21 households that might affect the ability to get to the
22 polls and vote on a Tuesday in light of work and
23 childcare obligations?

24 A. Differentially than other population racial
25 groups? Is that what you're asking me?

1 Q. Correct. Are there more black single-parent
2 households than white single-parent households in
3 Mississippi?

4 A. I don't know exactly if that's the case or not.

5 Q. And just looking at that exhibit that we
6 just -- looking at Mr. Cooper's responsive report in
7 paragraph 33, he says: "Other voters may have
8 responsibilities that make it impossible to walk. 51.4
9 percent of the black female head of households with
10 children live in poverty compared to 37.4 percent of
11 their white counterparts." Any reason to dispute that?

12 A. Does he give a source? Again, I don't have any
13 reason to dispute it, but I just wonder what the sources
14 are and how consistent they are, that's all.

15 Q. I can represent to you that it's all ACS data.

16 A. Okay. And then the question is, again, you
17 know, the sample sizes and whether or not they're
18 statistically different. So if you just pull things off
19 the ACS and start comparing them, depending on where
20 you're at and depending what the census bureau does, I
21 would prefer not to answer that until I actually saw the
22 size of the sample, what the margins of errors are on
23 it, because it may be the case in some of these
24 comparisons that there's no statistically different --
25 significant difference. Do you follow me? So I don't

1 know in advance, just asked -- if you're asking about
2 the state as a whole and that's what he's arguing, for
3 the state as a whole, then it may be the case there is
4 one.

5 Q. And by the way did you do a test of
6 significance, a T-test or something else to look at your
7 analysis of polling place proximity?

8 A. No.

9 Q. By the way, do you know if there are racial
10 disparities in Mississippi in terms of how long people
11 have to wait to vote at the polls in Mississippi?

12 A. I don't know.

13 MR. SAVITZKY: And we can mark right now --
14 it's a little out of order, but this is just where it
15 is. This is Dr. Burch's rebuttal report, marking it as
16 Exhibit 18. There should be a copy for you, Mike, but
17 I'm not seeing it. Give you mine.

18 BY MR. SAVITZKY:

19 Q. And looking at pages 12 to 13 of Dr. Burch's
20 rebuttal report -- let me know when you're there.

21 A. I see it.

22 Q. Looking at the bottom, she says: "Further
23 analysis of the CES which I report shows that among
24 validated Mississippi voters, 18.9 percent of white
25 voters report they waited for more than 30 minutes to

1 vote compared to 40.7 percent of black voters." Any
2 reason to despite that?

3 A. Yeah, there is.

4 Q. Any reason other than the criticisms of the CES
5 that we'll talk about presently?

6 A. That I don't know. But definitely I'd start
7 with CES.

8 Q. All right. And we'll get to that. And hang on
9 to -- you can put Dr. Burch's rebuttal aside, but don't
10 get let it get too far.

11 So you can't say whether the various racial
12 disparities we talked about including the ones that are
13 reflected in ACS might negate any theoretical advantage
14 in terms of polling place proximity for black
15 Mississippians?

16 A. If you're asking me right off the top of my
17 head, my answers were, I think, pretty consistent saying
18 for the most part, some of them are research questions,
19 so they have to be looked into in order to answer the
20 full question.

21 Q. And looking at paragraph 82 of your report, you
22 say: "While each of Mr. Cooper's illustrative and least
23 change plan increases the percent of the black
24 population in district 1, I want to know if the
25 increases he achieved came at the expense of black voter

1 proximity to the polls." What do you mean by that?

2 MR. WALLACE: Same objection as to outside
3 the scope of the court's order, but he may answer.

4 A. Yeah, it looks on average if you change the
5 counties around and you're moving black populations
6 around, what does it look like in terms of proximity to
7 the polls.

8 Q. Well, why would putting different counties into
9 supreme court districts change the proximity to the
10 polling places which are intra county?

11 A. Yeah. Well, it's a question I asked.

12 Q. Well, I guess my question is: How could it
13 possibly change the proximity of people to polling
14 places to put them in one supreme court district or
15 another if all the supreme court districts are made up
16 of whole counties?

17 A. It's a question that I asked. So -- and again,
18 I stress that I don't know exactly where the -- how they
19 were placed initially.

20 Q. Would you agree that whether a county is in one
21 supreme court district or another doesn't have any
22 bearing on where your polling place is?

23 A. That I don't know.

24 Q. You say: "If Mr. Cooper's plans increase the
25 number and proportion of blacks but he moved close poll

1 proximity blacks out of district 1 and moved distant
2 poll proximity blacks into district 1, one could argue
3 that the actual impact of such plans would be to
4 increase black voter disenfranchisement and risk fewer
5 blacks actually turning out to vote."

6 A. Yes.

7 Q. What is the basis -- what is your basis for
8 suggesting that changing the supreme court lines to draw
9 a black majority district would increase black voter
10 disenfranchisement and risk fewer blacks actually
11 turning out to vote?

12 A. Well maybe that the average citizen's in a
13 county, not in supreme court district 1, is different
14 than a county that is in supreme court district 1 that
15 has moved out of it. So for example, what -- pick a
16 county. In every county in every state are the polling
17 distances for any given population exactly the same,
18 they probably vary. So urban areas are probably in a
19 closer proximity, correct, would you agree, than you
20 would be in rural areas. So that's one example of how
21 they might change. So even there it's at county level,
22 it may be the case that by moving them around, you've
23 now put people that were on average farther away from a
24 voting poll into this new district.

25 Q. Did you do any analysis to demonstrate that

1 so-called close poll proximity blacks are more likely to
2 vote than so-called distant poll proximity blacks?

3 A. No.

4 Q. Now in your report, did you ever go back and
5 answer the question that you posed and offer an opinion
6 or a conclusion about whether the actual impact of
7 Mr. Cooper's illustrative plans would be to increase
8 black voter disenfranchisement and risk fewer blacks
9 actually turning out to vote?

10 A. I'd have to look in the report again, so I
11 don't recall off the top of my head if I did.

12 Q. It's not that many paragraphs, if you want to
13 just take a quick look.

14 A. Sure, I'll look here.

15 Q. It's the section between paragraphs 81 --

16 A. Or even in the executive summary.

17 Q. -- or 89.

18 A. Yeah. I'm looking at the executive summary.
19 Paragraph, what was it, 9?

20 Q. 81 through 89 is your discussion of this issue.

21 A. Thank you.

22 (Witness reviewing exhibit.)

23 A. So no, I didn't look at it by district, I
24 looked it on average for the state as a whole.

25 Q. So you didn't go back and look at what you

1 called "the question" of whether the increases Cooper
2 achieved came at the expense of black voter proximity to
3 the polls?

4 A. That's correct, I did not. Thank you.

5 Q. Now let's talk about the analysis that you did.
6 How did you go about calculating the voting age
7 population living within a half mile of their polling
8 place?

9 A. Let's see how it's described here. This is
10 done using the geospacial stuff that Tom Bryan has
11 access to, and I asked him to give me ideas about how
12 far people were from polling places. So when he got the
13 list of where they were located, then he could do the
14 GIS magic with VAPs and VAP by race within certain
15 distances of those places. So that's how they're done.

16 Q. So Bryan GeoDemographics did this analysis?

17 A. Oh, absolutely. Yeah.

18 Q. What parameters did you give them?

19 A. Just what I told you. I said that I'd like to
20 see what the distances are to polling places and, you
21 know, if it's -- do you want to do categories on it that
22 make sense or if you want just give me average
23 distances, and we discussed it a bit, and I said, yeah,
24 those look good in terms of what percent might be within
25 a quarter mile, half mile, up to a mile or so. And that

1 was done in conjunction with the data that were
2 available, how hard it was to assemble it and do it.

3 Q. And did you count the population of any census
4 block that contains a polling place as living within a
5 half mile of the polling place?

6 A. I can't remember the exact details and how it
7 was done. When you're looking at census blocks, that's
8 the lowest geography you get and there are ways that I
9 know in GIS you split those using different algorithms.
10 And that's likely what he did to do it, but I don't
11 recall the details.

12 Q. And the census block can be larger than a mile
13 around; right?

14 A. It can, depending what the population of where
15 it's at, what makes up natural boundaries for one.

16 Q. So if you count on the population of the census
17 block containing polling places, living within a half
18 mile of that polling place, some of the people in that
19 census block might actually live more than a half mile
20 away from the polling place?

21 A. But again, I stress that there are algorithms I
22 know GIS people use that will try and accommodate that
23 so you're not just doing something that gross. Do you
24 follow me? And what they do exactly, I don't know.

25 Q. And you don't know what Bryan GeoDemographics

1 did in this case?

2 A. I don't.

3 Q. You don't know whether he used an algorithm to
4 make that distinction between people in the census block
5 that are actually within the half mile and people who
6 are actually outside the half mile?

7 A. I don't.

8 Q. And let's just look at Mr. Cooper's responsive
9 report. Again, it's Exhibit 10. You should have it?

10 A. On report 9 or 10?

11 Q. 10.

12 A. Thank you.

13 Q. I'm a little concerned that your Exhibit 10 has
14 gone missing here.

15 MR. WALLACE: I have a 10 if you need it.

16 THE WITNESS: Thank you.

17 MR. SAVITZKY: Do you have it?

18 MR. WALLACE: Yeah. Tell me what paragraph
19 you want.

20 MR. SAVITZKY: I'm looking at page 12.

21 BY MR. SAVITZKY:

22 Q. And what Mr. Cooper does here in Figure 4 is,
23 shows the census blocks which are in blue and then the
24 half mile radii which are the circles there. So you can
25 see there's significant amounts of those census blocks

1 that are outside the half mile radius of the polling
2 place; right?

3 A. Correct. I can see that.

4 Q. Okay. And did you review Mr. Cooper's analysis
5 in his report of this polling place proximity analysis
6 that you did?

7 A. I remember reading through this and putting it
8 aside.

9 Q. All right. And just starting at paragraph 24
10 on page 11 of Mr. Cooper's responsive report, Mr. Cooper
11 used geospacial analysis to calculate that actually
12 26.3 percent of black voters live within a half mile of
13 their polling place; right?

14 A. That's what it says here in paragraph 24.

15 Q. And do you dispute his analysis?

16 A. I've got no reason to dispute or not dispute
17 it.

18 Q. And Mr. Cooper conducted -- after conducting
19 this analysis said that the Bryan GeoDemographics
20 analysis erroneously does count the entire VAP living in
21 a given census block as being half mile from a polling
22 place?

23 MR. WALLACE: Where does he say that?

24 Q. Paragraph 25.

25 MR. WALLACE: It's in 25?

1 A. Yeah, I saw it.

2 Q. Okay.

3 A. That's what he says.

4 Q. And you don't have any reason to dispute that?

5 A. Not at this time.

6 Q. All right. So just a few questions about
7 socioeconomic analysis performed by Mr. Cooper and
8 Dr. Burch. Looking at Exhibit 9, Mr. Cooper's October
9 report and beginning on page 36, Mr. Cooper analyzes the
10 socioeconomic profiles of the State of Mississippi using
11 five year ACS data. Let me know when you're there.

12 A. I'm there.

13 Q. You don't dispute any of his analysis with
14 respect to the ACS data there?

15 A. Let me read through this. So it appears it's
16 from the 2021 ACS data, singular data for the State of
17 Mississippi. Okay. No, I have no reason to dispute
18 that those are numbers he took from the single year 2021
19 ACS data.

20 Q. Thank you. And by the way, just because it
21 came up earlier, looking at the top of page 37, it does
22 like seem you get SNAP participation rates with the ACS?

23 A. It looks like it, yes.

24 Q. And in paragraph 64 of his report on page 36,
25 Mr. Cooper says: "In Mississippi, African Americans

1 trail non Hispanic whites across most key indicators of
2 socioeconomic wellbeing." Do you dispute that?

3 A. Based on what's in the ACS, no.

4 Q. And in paragraph 66 and 67 of Mr. Cooper's
5 report, there's the last two paragraphs, he explains
6 that he reviewed and prepared charts of the same ACS
7 data for counties and municipalities and that
8 socioeconomic disparities by race also exist at the
9 county and municipal levels throughout Mississippi. Do
10 you dispute that?

11 A. Well, that's one where because it's at the
12 county level and because of the sizes, I'd want to look
13 at what the margins of error are before I made those
14 statements. I trust it at the state level that the
15 margins of error are sufficiently small, it's not an
16 issue, but you see it down some of the counties, it
17 could be.

18 Q. You dispute that the ACS data reflects those
19 disparities?

20 A. That I don't dispute, it's just a matter of how
21 you interpret it and if -- if the margins of error, if
22 they're 90 percent margin of error overlap the mean of
23 the other group, then there's no statistically
24 significant difference. So you can't make the
25 statement. Do you follow me?

1 Q. Understood. And setting aside whether or
2 not -- setting aside any issues with respect to the sub
3 sample size for counties or municipalities, with respect
4 to ACS data for Mississippi, you don't dispute that that
5 is what the ACS data is --

6 A. No, I don't have any reason to believe
7 Mr. Cooper put down other data in there other than what
8 he took out of it.

9 Q. And let's now mark -- we did it a little out of
10 order because her rebuttal is already marked, but the --
11 mark Dr. Burch's report now as Exhibit 19.

12 A. I've got this piece of paper handed to me with
13 nothing on it. I don't know what it is.

14 Q. That's Dr. Burch's rebuttal report.

15 A. Okay.

16 MR. WALLACE: Have we got one marked?

17 MR. SAVITZKY: Should be 18. Here's 19.

18 THE WITNESS: Here's 18.

19 MR. SAVITZKY: Okay.

20 THE WITNESS: That was just some other piece
21 of paper, same thing, I guess. Okay. That's.

22 MR. WALLACE: We do have 19 for me? I've
23 got 18.

24 MR. SAVITZKY: 19 for you, 19 for me. All
25 right. We all have 18 and 19 which we'll be looking at

1 more presently.

2 BY MR. SAVITZKY:

3 Q. But just for now looking at what's been marked
4 as Exhibit 19, on pages 3 through 10 of this report, Dr.
5 Burch analyzes educational markers like student test
6 scores and school district segregation, education
7 attainment by race. You don't dispute her analysis of
8 racial disparities in education in Mississippi on that
9 front?

10 MR. WALLACE: Objection to being outside the
11 scope of the court's order, but he may respond if he
12 can.

13 A. In general, no. I'd have to look at some of
14 the details on where she got the data and what she's
15 pulling off to make a definitive statement. But in
16 general, no.

17 Q. And looking at pages 10 to 13 of this report,
18 starting at page 10, Dr. Burch analyzes racial
19 disparities with respect to income, poverty and wealth
20 looking at, for example, household income, access to a
21 car, poverty, unemployment.

22 A. I mean, again, I --

23 MR. WALLACE: He didn't ask a question yet.

24 Q. You don't dispute her analysis of those racial
25 disparities with respect to income and poverty?

1 MR. WALLACE: And I have the same objection
2 to that question, and he may answer it.

3 A. The answer is, there's no reason for me to
4 dispute what she's found from the current population
5 survey --

6 Q. And I believe --

7 A. -- American Community Survey, and so on.

8 Q. And looking at pages 13 to 16, Dr. Burch
9 discusses racial disparities in housing, for example,
10 home ownership, looking at ACS data there for home
11 ownership by race. You don't dispute her analysis of
12 racial disparities with respect to housing in
13 Mississippi?

14 MR. WALLACE: Same objection. He may
15 answer.

16 A. Well, I don't -- I haven't -- I'm not looking
17 at her analysis in depth, but I don't dispute the data
18 she got from the American Community Survey as being
19 reasonably accurate. The same from the Current
20 Population Survey for the state as a whole.

21 Q. Or for example, I'm just drilling down on
22 page 16, the last sentence, last two sentences in her
23 report, she says: "The 2019 report by the Mississippi
24 Home Corporation, a state entity, found that black
25 people in Mississippi were denied mortgage loans more

1 frequently and faced discrimination in rental markets."

2 MR. WALLACE: Where is that?

3 MR. SAVITZKY: This is the second to the
4 last sentence in the second to the last paragraph on
5 page 16 of Exhibit 19, Dr. Burch's October report.

6 MR. WALLACE: All right. Same objection.
7 He may answer.

8 A. No. I've got no reason to dispute it.

9 Q. And she goes on, she says: "Other studies have
10 also shown that black Mississippi applicants faced
11 discrimination in home lending, discriminatory practices
12 affect ability of black renters to find rental housing
13 in Mississippi." And that's from the National Fair
14 Housing Compliance, DOJ?

15 MR. WALLACE: Same objection. He may
16 answer.

17 A. My answer is the same as the last time.

18 Q. No dispute?

19 A. No dispute.

20 Q. Okay. And looking at pages 16 through 18 of
21 Dr. Burch's report, she discusses racial disparities
22 with respect to health, for example, in heart disease,
23 access to healthcare, access to a primary doctor, health
24 insurance. You don't dispute her analysis of racial
25 disparities with respect to health in Mississippi?

1 MR. WALLACE: Same objection. He may
2 answer.

3 A. If she's summarizing the data that is shown in
4 the tables given the sources that they're from, I have
5 no reason to dispute it.

6 Q. And looking at pages 18 to 20 of her report,
7 Dr. Burch analyzes racial disparities with respect to
8 criminal justice. And like you, she looks at the racial
9 makeup of the correctional facility populations and,
10 just looking at her chart here on page 19, looks like
11 she got a very similar result to you in terms of
12 60 percent of the prison population being black?

13 MR. WALLACE: Same objection. He may
14 answer.

15 A. And again, based on the fact that her analysis
16 are really descriptive, verbal descriptions of what's in
17 the tables, I have no reason to dispute it.

18 Q. You don't dispute the political science
19 literature discussed in Dr. Burch's report that voting
20 participation is generally correlated with socioeconomic
21 wellbeing?

22 MR. WALLACE: Same objection, and perhaps
23 outside the range of a demographer's expertise, but he
24 may answer.

25 A. Given my knowledge of it, I don't dispute it.

1 Q. You don't dispute that this letter -- this
2 literature shows generally that when a person has more
3 education, more income, more health, they're more likely
4 to vote and participate in politics?

5 A. In general, I think that's -- I agree with
6 that.

7 Q. And in light of that general rule, it would be
8 a reasonable hypothesis that if there was racial
9 minority group in a jurisdiction that had less
10 socioeconomic wellbeing, less education, less income,
11 less health, they would have lower levels of voting and
12 participation?

13 MR. WALLACE: Same objection. But he may
14 answer.

15 A. And my answer to that again is that it depends
16 on what racial group and what part of country and when
17 and where you're looking at it. It's a research
18 question.

19 Q. In light of -- let me ask it differently, then.

20 It would be a reasonable hypothesis in light
21 of that general rule that the correlation between
22 socioeconomic wellbeing and voting and political
23 participation, that black voters in Mississippi who have
24 less socioeconomic wellbeing, less income, less
25 education, less health, less access to housing would

1 have lower levels of voting and political participation?

2 MR. WALLACE: Same objection. He may
3 answer.

4 A. Again, it's -- it's not an easy question to
5 answer from the standpoint of it's still pretty general.
6 So it may be that certain areas of the state, people who
7 are in exactly the same condition vote at a much higher
8 rate than people very similar, exact same
9 characteristics elsewhere.

10 Q. Well my question is: Given all of this
11 information that we just discussed that you don't
12 dispute from the ACS, from other reputable sources
13 showing the racial disparities across many different
14 indicators and given the political science literature
15 that you don't dispute that socioeconomic wellbeing and
16 voting are correlated, it would be a reasonable
17 hypothesis that black voters in Mississippi vote less
18 and participate less than white voters in Mississippi?

19 MR. WALLACE: Same objection, and he may
20 answer.

21 A. And that's a reasonable hypothesis.

22 Q. So let's now -- well first of all, I think
23 we're done talking about Mr. Cooper's reports at this
24 point, so we can move those to the side if that'll make
25 things a little easier for you before we start our next

1 set of questions. And these ones can go to the side as
2 well, actually. And do you have Exhibit 10? Are we
3 still --

4 MR. WALLACE: I've got 10 if he doesn't.

5 MR. SAVITZKY: We'll re-mark it if we have
6 to.

7 MR. WALLACE: Is Cooper No. 10?

8 MR. SAVITZKY: Yes.

9 MR. WALLACE: Yeah, I've got it. You don't
10 have it over there, is your problem; right? She doesn't
11 have it.

12 MR. SAVITZKY: Yeah, we'll --
13 it's floating around here somewhere.

14 MR. WALLACE: We'll check it later.

15 BY MR. SAVITZKY:

16 Q. So with that, I want to talk about the voter
17 turnout piece of this in your analysis of voter turnout
18 in Mississippi starting with the current population
19 survey.

20 A. And is that from the initial report or from
21 another report? Are you talking about the report that
22 we've been talking about here that you've given me, this
23 one? That's what we're talking about?

24 Q. I'm actually going to -- I'm talking about your
25 surrebuttal -- we'll eventually talk about your

1 surrebuttal.

2 A. Okay.

3 MR. SAVITZKY: In fact, this is a great time
4 to mark your surrebuttal report. Hold on. All right.
5 So I'm now going to mark as Exhibit 20, I believe.

6 MS. JONES: Yes.

7 MR. SAVITZKY: Your -- oh, this isn't your
8 surrebuttal report. I'm sorry. Bear with me.

9 (Pause in the proceedings.)

10 MR. SAVITZKY: Well --

11 MR. WALLACE: Tell you what, I have to go
12 check out of the hotel. You can keep digging while I'm
13 checking out of the hotel. I'll be back in, you know,
14 ten minutes, and maybe you will have found it by then.

15 MR. SAVITZKY: Thanks. Let's go off the
16 record.

17 (A break was taken from 2:31 to 2:55 p.m.)

18 MR. SAVITZKY: Back on the record. So we
19 were marking Exhibit 20 which is your surrebuttal
20 report. That's marked for you here. Mr. Wallace, a
21 copy. And I have that here. Okay.

22 BY MR. SAVITZKY:

23 Q. Now, before we sort of get into numbers and dig
24 into the details, let's start with the CPS. What is the
25 CPS?

1 A. The Current Population Survey?

2 Q. Yeah.

3 A. It's a regular survey that's done by the census
4 bureau. It's large scale survey, it has supplements in
5 it, so one of the supplements is a demographic
6 supplement.

7 Q. Is it done by the census bureau?

8 A. It's -- it's probably done for other agencies,
9 but the census bureau is the one that does a lot of
10 survey research, so the CPS is technically done, I
11 think, by the census bureau.

12 Q. And the CPS includes a voting and registration
13 supplement?

14 A. That's one of the supplements.

15 Q. And that includes questions about whether the
16 respondent's registered and voted?

17 A. Yes.

18 Q. And no one goes back and asks the
19 respondents -- or sorry, strike that.

20 No one goes back and checks whether the
21 respondents actually are registered to vote.

22 A. As far as I know, they don't.

23 Q. No one goes back and checks if the respondents
24 actually voted?

25 A. Just like everything else that's in there, they

1 don't go back and check are you really this age? Are
2 you really this ethnicity? Yeah, so as far as I know,
3 it's -- they pretty much take the respondents' words as
4 given.

5 Q. It's purely a survey, there's no sort of
6 external validation process?

7 A. You mean in the sense of the answers --

8 Q. Correct.

9 A. -- they've given?

10 Q. The veracity of the answers are not externally
11 validated?

12 A. That's what I understand the case to be,
13 correct.

14 Q. And then looking at your January report still
15 and a page 70, you have a table, Table IV.A.2 where you
16 looked at Mississippi voting by race and ethnicity using
17 CPS data; is that right?

18 A. Yes.

19 Q. And based on the data, you conclude that black
20 turnout in Mississippi in 2020 was 72.9 percent and
21 white turnout was 69.8 percent?

22 A. Correct.

23 Q. And this CPS data is the primary basis for your
24 conclusion that blacks vote at higher rates than whites
25 in Mississippi as a whole?

1 A. It is.

2 Q. And looking at this table, you conclude overall
3 that the -- that 70 percent of Mississippians voted,
4 70.3 percent, I suppose, of Mississippians voted in the
5 2023 election?

6 A. Yes.

7 Q. And you agree, as you set out in your table in
8 that total voted column, that 70.3 percent turnout would
9 mean that 1.531 million people voted in Mississippi in
10 2020?

11 A. Yes.

12 Q. And just looking at Dr. Burch's rebuttal report
13 which was previously marked as Exhibit 18, and turning
14 to page 2 of that report --

15 A. So we're on 18 again --

16 Q. Yeah.

17 A. -- or 20.

18 Q. 18. Right here. You have it right here.

19 And looking just at page 2, second full
20 paragraph Dr. Burch says: "The official vote count
21 certified by the Mississippi Secretary of State show
22 that only 1,313,759 votes were cast or present, highest
23 participation rate in Mississippi in the November 2020
24 election." Do you dispute that?

25 A. No.

1 Q. So the CPS overstates the level of turnout in
2 Mississippi by about 200,000 people, 1.531 million
3 versus 1.313 million?

4 A. Given the years where this is done and the fact
5 it's Mississippi, that appears to be the case.

6 Q. I'm sorry, I just want to make sure, is that
7 answer qualified somehow?

8 A. Well it's qualified with the data that are used
9 to do it. In that sense, are the CPS data exactly for
10 the same year that the turnout data are for and things
11 like that.

12 Q. Right. And so --

13 A. That's all the qualifications I'm making.

14 Q. So with respect to the 2020 election --

15 A. Yes.

16 Q. -- and comparing that number from the official
17 vote count by the Mississippi Secretary of State, and
18 the CPS estimate you derived from the 2020 general
19 election turnout, the CPS overstates the level of
20 turnout by about 200,000?

21 A. Yes.

22 Q. And you agree, and you stated this at paragraph
23 149 of your report, page 83, that there is a "likelihood
24 of overreporting on the CPS voting and registration
25 supplement."

1 MR. WALLACE: I'm not sure I -- apparently,
2 he didn't hear a question, and I don't think I did
3 either.

4 Q. You agree that there's a likelihood of
5 overreporting on the CPS voting and registration
6 supplement?

7 A. I do.

8 Q. And that -- meaning that when the respondents
9 get the survey questions to the CPS, when they
10 overreport, we mean they tend to say they registered or
11 they voted even when they aren't registered or didn't
12 vote?

13 A. That's how I'd interpret overreporting.

14 Q. And looking at paragraph 148 of your report on
15 page 83, you would agree that this issue of
16 overreporting of political participation is present with
17 any survey data related to voting?

18 MR. WALLACE: This is in his original
19 report?

20 MR. SAVITZKY: Correct.

21 MR. WALLACE: Here it is.

22 A. It could be. I don't know enough about every
23 survey that's ever done to say whether or not they do
24 it, so of the ones I'm familiar with like the CPS, it's
25 looks like they overreport.

1 Q. Right. And you say this caveat -- this is the
2 last sentence -- last sentence of this paragraph: "This
3 caveat would not only apply to the SSRC survey data but
4 also the CPS, the APS, any other survey in the United
5 States that includes questions on voter registration" --

6 A. And I stress it's a caveat. But again, we
7 don't know exactly what's going on, but I'd be careful
8 if I was looking at voter registration survey
9 information and voting information.

10 Q. And you wouldn't dispute that the CPS itself
11 says that respondent misreporting is a source of error
12 in the CPS estimates?

13 A. Absolutely I would not dispute that.

14 Q. And looking at paragraph 148 that we've been
15 looking at of your January report, you say with some
16 citations to the literature that: "While both blacks
17 and whites tend to overreport voter registration, blacks
18 may do so at higher rates -- at a higher rate than white
19 as is also the case with voting."

20 A. Correct.

21 Q. And in the bibliography of your report, you
22 cite some literature going into detail on this, a 2021
23 piece called: Vote Overreporting While Black:
24 Identifying the Mechanism Behind Black Survey
25 Respondents Vote Overreporting. And let's just grab

1 that and mark it as Exhibit 21. Copy, copy. This is
2 the piece that was in your bibliography mark it as
3 Exhibit 21.

4 You reviewed this article in putting your
5 report together?

6 A. I did.

7 Q. And looking at page 3, I think right at the
8 top -- just let me know when you're there.

9 A. That's the paragraph that starts:
10 "Overreporting among African Americans"?

11 Q. Correct. And the next sentence is: "Perhaps
12 one of the most consistently documented aspect of
13 overreporting is that African Americans overreport at
14 higher rates than whites."

15 A. That's correct.

16 Q. Do you agree with that assessment?

17 A. Yes. Based on the evidence I've seen.

18 Q. And in her rebuttal report, Dr. Burch also
19 pointed to another 2022 article by Ansolabehere and
20 Fraga and Shaffner in American -- I think it's in
21 American Politics Research specifically about
22 overreporting on the CPS. Do you recall that?

23 A. No. I have to look at it, but it sounds
24 familiar, so --

25 MR. WALLACE: It's in here, 18.

1 THE WITNESS: Thank you. And where is it?
2 What page was it?

3 MR. SAVITZKY: Well I was going to mark the
4 actual article, but I can -- I can refer you to the --
5 so it's cited on page 3, Footnote 6 of her report. She
6 says: "New research shows not only does the CPS
7 overestimate turnover for all groups, it does so
8 differentially by race such that it consistently
9 overestimates black turnout even more than white
10 turnout."

11 A. Yes.

12 Q. And she cites in an article that I'm now going
13 to mark as Exhibit 22 entitled The Current Population
14 Survey Voting and Registration Supplement Overstates
15 Minority Turnout.

16 MR. WALLACE: Where is this cited?

17 MR. SAVITZKY: This is cited in Footnote 6
18 of Dr. Burch's rebuttal report.

19 BY MR. SAVITZKY:

20 Q. Do you agree that this is a paper by a
21 reputable political scientist in an academic journal for
22 the discipline?

23 A. Well I don't know them personally, so if you
24 want me to attest to their reputations, I'm assuming
25 they're reputable, but yes, I agree that this is a --

1 this is an article by academics that's published in an
2 academic peer-reviewed journal.

3 Q. I'm just looking at the summary text on page 1
4 there, it says: "We compare CPS estimates to official
5 voter turnout records from 2008 to 2018, document
6 consistent significant discrepancies that call into
7 question the reliability of CPS turnout statistics." Do
8 you see that?

9 A. I do.

10 Q. And it states: "Specifically, the CPS
11 overestimates black and Hispanic turnout relative to non
12 Hispanic whites whether relying on turnout rates as a
13 shared, eligible citizens or the racial ethnic
14 composition of the voting population." Do I have that
15 right?

16 A. You do.

17 Q. And they say: "Sampling error in commonly used
18 adjustments to CPS estimates do not account for or
19 correct the bias."

20 A. All of it, correct.

21 Q. And just looking at their conclusion in the
22 last page -- or excuse me, on page, I think, 4 -- oh,
23 no, it's on page 5, excuse me, of the document, yeah,
24 conclusion, states: "The author suggests that CPS
25 should conduct a voter validation study akin to those

1 undertaken by other surveys." Do you see that?

2 A. I do.

3 Q. You agree with that?

4 A. I do.

5 Q. And they say: "In the meantime, we suggest
6 that analysts uses caution when making inferences about
7 variation and turnout rates by racial or ethnic groups."
8 Right?

9 A. They do.

10 Q. Do you agree with their assessment?

11 A. I think for the research at this point in time,
12 I think their assessment is well taken.

13 Q. So given the fact that the top line CPS
14 estimate of voting in Mississippi shows overreporting by
15 about 200,000 -- I think it's 12 percent overage -- it
16 would be a reasonable hypothesis that this overreporting
17 would in particular overstate black turnout?

18 A. That would be a reasonable hypothesis.

19 Q. So let's go back to your conclusion. You
20 conclude based on the CPS that blacks vote at higher
21 rates than whites in Mississippi as a whole?

22 A. That's correct.

23 Q. As we discussed, setting aside the issue of
24 overreporting, just assuming the CPS is reliable for the
25 moment, your analysis of the CPS data for 2020 shows a

1 3 point difference between black and white turnout
2 rates, 72.9 versus 69.8; right?

3 A. Correct.

4 Q. So even a modest racial differential in
5 overreporting on the CPS would mean that black turnout
6 would, in fact, be lower than white turnout?

7 MR. WALLACE: Object to vagueness of
8 "modest," but you may answer.

9 A. It could be.

10 Q. Particularly given of the fact that you have
11 overreporting at the level of 200,000 voters?

12 A. It could be.

13 Q. And you didn't run any type of t-test on those
14 two numbers 72.9, 69.8 to determine whether there's a
15 significant difference between them, did you?

16 A. That's correct. I did not.

17 Q. And actually looking at that table we looked at
18 before on page 70 of your report?

19 A. This is my original report?

20 Q. Yeah, your January report. Thank you. Table
21 IV.A.2?

22 A. Yes.

23 Q. You report a margin of error for some of these
24 numbers --

25 A. Yes.

1 Q. -- 4.1 for white non Hispanic turnout and 4.8
2 for black turnout; right?

3 A. That's correct.

4 Q. And what does the margin of error mean in this
5 context?

6 A. The margin of error means that the percentage
7 points can go up and down over the mean, the percentage
8 which is the type of mean on that. So as I recall,
9 the -- unlike the ACS, I think the CPS does 95 percent
10 confidence intervals, I believe. I could be wrong,
11 but -- so what this is stating, then, is saying that
12 we're 95 percent certain that the true amount is within
13 plus or minus 4.8 percent of 72.9.

14 Q. So fair to say that, again, just setting aside
15 the overreporting issue for the moment, assuming, you
16 know, the veracity of the responses, the real number for
17 self reported black turnout in Mississippi on the CPS
18 could be as low as 68.1 percent?

19 A. It could be if you're looking at the -- if you
20 want to look at a 95 percent confidence interval. So if
21 you look at it that way, there's a range of numbers and
22 we say we're 95 percent certain that it -- it's a range
23 estimate rather than a point estimate.

24 Q. And what the CPS is telling us is that the
25 confidence interval is between 68.1 percent and 77.7?

1 A. Give or take, yeah, that's what it's telling
2 us. And I believe it is a 95 percent confidence
3 interval.

4 Q. And then looking at the white turnout number of
5 69.8 percent, margin of error there is 4.1; meaning
6 that, again, setting aside overreporting, assuming the
7 veracity of the responses, the real white turnout number
8 could be as high as 73.9 percent, and that would be
9 within the confidence interval for the survey?

10 A. Yes.

11 Q. So 68.1, the lower bound of the confidence
12 interval for black turnout is lower than 69.8, the mean
13 white turnout number?

14 A. Yes.

15 Q. And 73.9, the high bound of that confidence
16 interval for white turnout is higher than 72.9, the mean
17 level of estimation of black turnout?

18 A. Absolutely.

19 Q. So these confidence intervals for black turnout
20 and white turnout in the CPS substantially overlap?

21 A. Yes, they overlap. The upper end of one
22 extends across the mean of the other one and vice versa.
23 In that sense, they overlap.

24 Q. I mean, they don't overlap by just a little
25 bit, the mean of one is within the confidence interval

1 of the other?

2 A. That's what I just said, I thought.

3 Q. But not just over -- in other words, they don't
4 just -- it's not simply that the upper bound of one and
5 the lower bound of other cross a little bit, the mean
6 are within the confidence interval?

7 A. That's the important part. It's not the
8 confidence interval themselves that overlap, it's do
9 they cross over the mean of the other independent
10 sample.

11 Q. And when the confidence intervals of the two
12 means overlap, that can indicate that the difference
13 between the two numbers is not statistically
14 significant?

15 A. It's indistinguishable, that's correct.

16 Q. And would you say that these numbers are not
17 statistically --

18 A. From a statistical standpoint, that's correct.

19 Q. So -- but your conclusion wasn't that black
20 voters and white voters vote at statistically similar
21 rates based on the CVS?

22 A. That's correct.

23 Q. Your conclusion was that blacks vote at higher
24 rates?

25 A. Yes.

1 Q. But the CPS only supports the conclusion that
2 blacks and whites vote at statistically similar rates?

3 A. Yeah. If you take that into account, and in
4 this case I took the point estimates at face value
5 because it's a relatively large sample, even though the
6 confidence intervals, one end overlap the mean. But
7 that's correct, you're absolutely correct.

8 Q. So let's talk about the CES. You would agree
9 that Dr. Burch in her rebuttal report analyzes turnout
10 using alternate data sources other than CPS, they're not
11 purely survey based?

12 A. Yes.

13 Q. And one of those is the CES, the Cooperative
14 Election Survey?

15 A. Correct.

16 Q. Actually, it's -- excuse me. It's Cooperative
17 Election Study?

18 A. Study, I think that's correct.

19 Q. As you say in paragraph 11 of your surrebuttal
20 report which has been marked as Exhibit 20, you agree
21 the CES "has been available and has been used by experts
22 in the field for many years."

23 A. That's paragraph 11?

24 Q. Correct.

25 A. Yeah, I'm pretty sure I said that in paragraph

1 11. Yes, I did.

2 Q. And you agree with that still?

3 A. Yes.

4 Q. And you would agree that one aspect of the CES
5 is that political participation by voters who respond to
6 the CES is independently validated?

7 A. Yes.

8 Q. So I want to discuss how the CES works to make
9 sure we're on the same page. And let's mark at this
10 point the technical documentation that you refer to in
11 your surrebuttal report, and we'll need one more sticky,
12 if you don't mind. Are we at 23?

13 MS. JONES: Yes.

14 MR. SAVITZKY: I'm marking as Exhibit 23
15 Guide to the 2020 Cooperative Election Study. And this
16 is the guide that you were looking at and referencing in
17 your surrebuttal report?

18 A. It is.

19 Q. Now you agree that with the CES, the first step
20 is that there's a preelection survey of adults that
21 includes demographic questions; right?

22 A. Yes.

23 Q. And in Mississippi, 462 adults responded to
24 that survey?

25 A. Yes.

1 Q. And in a 95 percent confidence level with a
2 5 percent margin of error, a sample size of 384 is going
3 to be representative of population of -- the population
4 of Mississippi?

5 A. In general I would say that, but you've got
6 another -- it's another set of qualifications that goes
7 with it just like they would go with the CPS and
8 particularly the CES. And that's involves the
9 weighting.

10 Q. So setting aside weighting and talking only
11 about whether or not the sample size is sufficient to be
12 representative, a sample size of over 384 will be
13 sufficiently large to be representative?

14 A. It depends on the purpose when you say that.
15 So I'll go slightly into lecture mode here, if that's
16 okay. So it depends on what's going to be important in
17 terms of confidence intervals and how willing you are to
18 live with error. So a sample size of 25, because it's
19 under what's called large sample theory might be
20 sufficient to answer questions for something and, you
21 know, they can deal with the confidence interval as they
22 come. When you generally get up to a sample size of
23 around 400, the rule of thumb is that with that, you can
24 say you're 95 percent certain you're within plus or
25 minus 5 percentage points of what the true number is

1 excluding all sources of other issues. But in general,
2 that's the case.

3 So when you say it's representative, a
4 sample, any sample, as long as it's taken scientifically
5 is designed to be representative of the population it's
6 taken from. That, I think, you clearly understand. So
7 the sample size simply makes your ability to refine
8 where the point estimates are and in general as long as
9 there's no change in variation, standard deviations, you
10 can then start to reduce the confidence intervals so
11 you're more certain where the actual true number lies in
12 the population when you're trying to infer to it.

13 So in that sense, every scientific sample
14 should be representative, I mean, that's the whole goal.
15 And what is particularly important when it's
16 representative is the variation. What you want is not
17 so much the mean in the sample to be the same as the
18 population mean, what you want out of the sample ideally
19 is that the variation of the sample is not exactly the
20 same, is very similar to what you get in the variation
21 of the population.

22 Q. And that's why you use weighting; once you have
23 a sufficient sample size, you also need to do weighting
24 to make sure that the sample accurately reflects all the
25 different attributes of the population?

1 A. Yeah, I would not probably not describe it as
2 exactly that, but what you're trying to do is say, look,
3 we know we don't have enough people in this particular
4 category, you know, race, socioeconomic, age, whatever
5 it might be category, and so we know -- and they may be
6 differentially representative in the sample, so we're
7 going to say here's something that we think is a
8 population that would fit to it. So it's post
9 ratification that's -- again, I'll go into slight
10 lecturing mode.

11 So you may have a sample survey and
12 60 percent of -- in a telephone survey, 60 percent of
13 the respondents say yes to a question. It turns out
14 that 60 percent of the population's female, 40 percent
15 is male, and all 60 percent of the -- 60 of the females
16 would say yes and all males would say no. So you've got
17 to readjust it -- do you follow me -- so that you've got
18 the right estimate of what you think the population
19 estimates are, because when you do that, then it looks
20 like it's going to be 50:50. And that's what weighting
21 attempts to do.

22 Q. And we'll talk a little bit more about
23 weighting, but I want to -- in terms of sample size --
24 and I believe it's the Krejcie and Morgan, you know,
25 formula originally, but we agree that once you get up

1 above 400, you should have a sufficient number of
2 respondents?

3 A. But again, what I stress in that regard is that
4 what you're doing is, you're -- you can make a statement
5 such as I'm 95 percent certain that I'm within plus or
6 minus 5 percentage points of what might be the case. If
7 you get up to 800, you can say I'm 99 percent certain.
8 So what it does is, it reduces the uncertainty around
9 the point estimate that you've gotten and the range
10 estimate.

11 Q. And I think we're totally on the same page, let
12 me restate the question just for clarity.

13 For purposes of being able to speak to
14 something with 95 percent confidence and with a
15 5 percent margin of error, once you get to 400 or more
16 respondents on a survey, you will have a sufficient
17 number of respondents to speak to the question at that
18 level of confidence?

19 A. Given that the survey was done on a scientific,
20 you know, random selection basis, given that you don't
21 have a whole lot of bias in the survey, given that
22 people -- there's not a lot of differential nonreporting
23 at the personal level, etcetera, etcetera, etcetera, all
24 else being equal, yes.

25 Q. Okay. And just looking briefly at Dr. Burch's

1 surrebuttal report which I think is -- oh, her rebuttal
2 report, excuse me, which is Exhibit 18, and looking at
3 page 4, Footnote 12 --

4 MR. WALLACE: Page 4, Footnote 12.

5 MR. SAVITZKY: Yep.

6 BY MR. SAVITZKY:

7 Q. Let me know when your there.

8 A. I'm there.

9 Q. You would agree that 462 respondents sample for
10 Mississippi is above the minimum sample size to detect
11 small effects, co D equals .2 with a standard level of
12 statistical power pointing -- in a significance level of
13 .05?

14 A. I agree, as I just said, when it's above that
15 number, then you've got a 95 percent chance of your
16 confidence -- your confidence intervals as stated, I'm
17 95 percent certain that the estimate that we're getting
18 is plus or minus 5 percent of what the true number of
19 the population is.

20 Q. And you wouldn't dispute Dr. Burch's
21 characterization that this number, that 462 is above the
22 minimum sample size to attack small effect at that level
23 of statistical power and significance?

24 A. Yeah, I would dispute that because there may be
25 small effects that that sample is not going to pick up

1 that large. Do you follow me? There could be really
2 minimal differences that are important in a certain
3 situation where a sample size of 400 is not large enough
4 to detect that it's a statistically significant
5 difference. So in that sense, it depends on the
6 context. And if you're asking about the context in
7 which we're talking about voting survey, then it
8 probably is adequate. I think that's a question you
9 wanted to ask me.

10 Q. Yes. And specifically in the context of
11 analyzing voting by race in Mississippi?

12 A. Yes. And I would qualify my answer again,
13 everything else being equal, it should be.

14 Q. So getting back to how the CES is done, we
15 talked about the first round of questions. Then there's
16 a second postelection wave of questions that are asked
17 of the same respondents in a postelection second set of
18 questions; right?

19 A. Yes.

20 Q. And the postelection wave, post wave of
21 questions includes questions about whether or not the
22 person voted?

23 A. Yes.

24 Q. Not every voter responds to the second wave?

25 A. That's correct.

1 Q. Most of them do.

2 A. (Nods head.)

3 Q. And then in addition to the data from these two
4 waves of survey questions, there's also vote validation
5 information that is added to the dataset --

6 A. Correct.

7 Q. -- for all the respondents; right?

8 A. I believe that's correct, for all the
9 respondents.

10 Q. And the validation is done using state voter
11 history databases to check whether voters are registered
12 and whether according to their vote history they
13 actually voted?

14 A. Yes.

15 Q. And we can look at the CES documentation which
16 was marked as Exhibit 23?

17 A. Yes, it's over here. I've got it.

18 Q. Looking at page 19 at the vote validation
19 variables, we can see -- so one of the variables is CL
20 voter status which reflects whether the voter is
21 registered; and if that's missing, then there was no
22 match on their registration record. Does that sound
23 right?

24 A. I think so.

25 Q. And then if you have CL 2020 GVM which is

1 whether the respondent voted in the 2020 general
2 election; right?

3 A. And how they voted.

4 Q. And their method of voting?

5 A. Yes.

6 Q. And if there's no data for that variable, then
7 they were not validated as having voted?

8 A. It's unknown, I believe, is what they put in
9 there.

10 Q. They say: "If missing, respondent did not have
11 a report of voting."

12 A. Yes.

13 Q. Okay. And you would agree with the statement
14 on page -- the next page, page 20 of the documentation,
15 if a person has any nonmissing value for CL 2020 and
16 GVM, they have a validated vote record for that
17 election?

18 A. Correct.

19 Q. And you would agree that this validation
20 procedure was performed for every survey respondent
21 whether or not they responded to the second wave
22 questions?

23 A. That's what the study states.

24 Q. You would agree that the validation was
25 performed whether or not they say they voted?

1 A. That's what they state, so I have no reason to
2 disagree with what they state they did.

3 Q. And so you'd expect in the data, there are some
4 respondents who did not answer the second wave of the
5 survey but can be and were validated as being registered
6 and having voted in the 2020 election?

7 A. Yes, that could happen.

8 MR. SAVITZKY: And just for completeness,
9 why don't we now mark two more exhibits. I didn't end
10 up marking Krejcie and Morgan, but I could. So what I'm
11 going to mark here, first with Exhibit 24, I'm going to
12 mark -- so I'm going to mark Exhibit 24, and you can
13 just look at that. That is the raw data, not every
14 variable, the selection variables, otherwise, the raw
15 data for the Mississippi CES.

16 BY MR. SAVITZKY:

17 Q. Can you just check that, see if you have any
18 reason to dispute that, and you can also confirm that it
19 has 462 rows.

20 A. I confirm that.

21 Q. Okay. And I'm also marking as Exhibit 25 same
22 exact data but this one just for ease of use, we have
23 re-coded the raw data with the equivalent textual
24 information so it's legible to work with.

25 A. Okay.

1 Q. Okay. And we can see in these columns there's
2 a variable that says: "Took post," do you see that?

3 A. Yes.

4 Q. Which means that they took the post wave
5 survey?

6 A. Yes.

7 Q. And then for those who didn't -- who have a no
8 for took post, they also have an N/A for their weight in
9 the common post weight weighting; right?

10 A. I see that.

11 Q. And we can see the CL voter status and CL 2020
12 GVM information is there as well?

13 A. I do.

14 Q. Okay. And take my copy out too.

15 And just to confirm what we were talking
16 about earlier, looking at row 60, which is on the second
17 page --

18 A. Of Exhibit 25, right.

19 Q. -- of Exhibit 25, we can see this row 60 is a
20 respondent who did not take the postelection survey;
21 right?

22 A. Yes.

23 Q. And they're not weighted in the post weight
24 weighting metrics; right?

25 A. That's correct.

1 Q. But if we look at whether they're registered
2 and whether they voted, they're active and they had a
3 validated vote; right?

4 A. Yes.

5 Q. And if we look at row 108 on the next page,
6 another example, took post N/A, not weighted, if we look
7 at common post weight and VV weight?

8 MR. WALLACE: What number are we on now?

9 THE WITNESS: 108.

10 MR. WALLACE: 108. Okay.

11 Q. Right, took post N/A, no weighting in common
12 post weight and VV weight; right?

13 A. Correct.

14 Q. But active with a registration record, and
15 their vote was validated?

16 A. Correct.

17 Q. I could actually go through a bunch of these,
18 but if I represented to you there are 29 such records
19 overall of voters who didn't take the post wave survey
20 but whose votes were validated, would you dispute that?

21 A. I believe you.

22 Q. All right. So we may -- we may use these again,
23 we'll just set them aside for now.

24 So the last part of the CES I want to make
25 sure we're square on is the weighting system, and we

1 started talking about this a little already. Generally
2 speaking, you would agree that weighting is used to make
3 statistics computed from the data more representative of
4 the population.

5 A. That's the idea, yes.

6 Q. And you would agree that using weights is more
7 or less ubiquitous in survey-based research?

8 A. It is.

9 Q. ACS is weighted? CPS is weighted.

10 A. (Nods head.)

11 Q. You would agree that if the sample is not self
12 weighted, it's a good idea to use weights as often as
13 possible?

14 A. I don't know if I can say that about any case,
15 but if you want to -- if you know the -- or have reason
16 to believe the sample is not representative of the
17 population in the sense you're talking about and that it
18 is a scientifically drawn random, even if it's a complex
19 random sample, then in general the idea would be you'd
20 want to use weights but you want to make sure the
21 weights represented the population in question too.

22 Q. And as you explain in your report: "The basic
23 idea of weighting in a survey is, you're assigning
24 weights to each of the responses in order to have the
25 attributes of the sample population more actively mirror

1 the attributes of the overall population."

2 A. Correct.

3 Q. And for the CES -- and we can look at page 16
4 of that technical documentation that I believe was
5 marked as Exhibit 23 -- you would agree the CES samples
6 were weighted to match the distributions of the 2019 ACS
7 on gender, age, race, Hispanic origin, and education
8 level?

9 A. And where's this?

10 Q. This is on page 16.

11 A. Thank you.

12 MR. WALLACE: 16? Okay. I thought you said
13 19.

14 MR. SAVITZKY: 16.

15 BY MR. SAVITZKY:

16 Q. Last sentence of the first paragraph: "The CES
17 sample was weighted to match the distributions in the
18 2019 ACS on gender, age, race, Hispanic origin, and
19 education level."

20 A. Yes.

21 Q. All right. And that is the set of weights that
22 are used for the common weight and common post weight --

23 A. Yes.

24 Q. -- systems. And then there's another set of
25 weights that was created, the VV weight and VV weight

1 post that's only for respondents for whom there was a
2 validated voter registration number; right?

3 A. Yes.

4 Q. And those were matched to the demographic
5 attributes of registered voters according to the 2020
6 CPS?

7 A. Yes.

8 Q. Now staying on page 16 of this technical
9 documentation that we're looking at and looking down the
10 page, we can see the four weighting variables that we
11 talked about earlier; right?

12 A. We can.

13 Q. Common weight, common post weight, VV weight,
14 VV weight post?

15 A. Yes.

16 Q. And the idea is that because we have common and
17 VV weights that represent the whole population of adults
18 versus with the VV weights, only those with a validated
19 registration record, and then we have post versions that
20 should be used when talking about the second wave
21 questions?

22 A. Correct.

23 Q. Because the population that answer the second
24 wave is slightly different, so you need to use different
25 weights to true them up to either the ACS in the face of

1 common most weight or the CPS in the case of VV wave
2 post?

3 A. Correct.

4 Q. And just continuing to refer to this discussion
5 of weighting in the technical documentation, you would
6 agree that the common weights are meant to ensure that
7 the sample is representative of all adults in
8 Mississippi in this case?

9 A. Yes.

10 Q. And the VV weights are meant to ensure the
11 samples are representative of all adult registered
12 voters?

13 A. Yes.

14 Q. And you would agree, as I think they say in the
15 technical documentation, common weight should be used
16 when you're characterizing the behavior of all adults?

17 A. Yes.

18 Q. And you would agree that common post weight
19 should be used when characterizing the behavior of all
20 adults but referring to variables from the second
21 postelection wave of questions?

22 A. That would be the ones who actually voted or --
23 right? They responded to the second wave, that's a
24 better way to say it, and reported whether they voted or
25 not.

1 Q. So you should use common post weight when
2 referring to all adults but looking at responses to the
3 second wave questions?

4 A. Yes.

5 Q. And you would agree that VV weight should be
6 used when characterizing the behavior only of registered
7 voters in Mississippi?

8 A. Yes.

9 Q. And you'd agree that VV weight post should be
10 used for characterizing the behavior of only registered
11 adults and also looking through results of those second
12 wave, post wave questions?

13 A. Yes.

14 Q. And just sticking with the VV weights for a
15 moment, you would agree that by definition, the VV
16 weights exclude people who were not independently
17 validated as being registered to vote?

18 A. I believe that's the case, yes.

19 Q. Meaning that those responses were given a
20 weight of zero, so when you apply the VV weight
21 variable, they're not counted?

22 A. I believe that's correct.

23 Q. So if someone reported on the second wave of
24 questions that they had voted but in fact they weren't
25 even registered, that would be an instance of

1 overreporting; right?

2 A. Yes.

3 Q. But that instance of overreporting wouldn't
4 show up if you used a VV post, it would be excluded from
5 the sample?

6 A. It could be, yes.

7 Q. Well --

8 A. Yes. Well, if that's the weight you're using,
9 giving the weight of zero, that's what you're saying.

10 Q. Yes.

11 A. Yes.

12 Q. So if you applied VV weight post, you would
13 exclude that instance of overreporting?

14 A. Yes.

15 Q. And that's because VV weight post only includes
16 people who were independently validated as registered?

17 A. Yes.

18 Q. And so if there are racial disparities in who
19 was validated is registered in the first instance, those
20 would all be masked when you use VV weight as well?

21 A. They could well be masked, yes, depending on
22 how many people were not carried forward into survey,
23 but they could be, yes.

24 Q. Well when you use VV weight or VV wait post,
25 you're only looking at voters who have a validated

1 registration?

2 A. I understand that. But the issue is how many
3 of the initial sample were not followed up in that part
4 of the survey. Do you follow me? So if it's a pretty
5 high number, then you would be having some problems; if
6 it's not so high a number, you may not be.

7 Q. I guess my question is: If there are racial
8 disparities in who is registered to vote and you use VV
9 weight such that people who aren't registered to vote
10 with a validated registration are taken out, you're not
11 going to pick up those disparities?

12 A. Right. On a visual basis, yes.

13 Q. And another item on the CES generally, in
14 looking at page 17 of this technical documentation,
15 there's a sort of discussion under the heading Accuracy
16 of the CES Sample with some discussion about validating
17 the sampling done in the CES by comparing survey results
18 to actual election results. Do you see that?

19 A. I do.

20 Q. And the authors say: "In the large sample, the
21 CES allows us to validate sampling by comparing the
22 state level samples within the survey with the actual
23 election results."

24 A. I do.

25 Q. You dispute that?

1 A. No.

2 Q. And the authors conclude that: "Overall the
3 results from these analyses demonstrate the CES is a
4 reliable source of data on voting at both the national
5 and state level." Do you dispute that?

6 A. That's their conclusion. I don't dispute it.

7 Q. So let's look at your surrebuttal report, which
8 we marked as Exhibit 20? Is that right?

9 MS. JONES: Yes.

10 Q. And looking at paragraph 11 of your report, you
11 say: "Generally speaking, when a survey sample is being
12 used to analyze extremely small populations, the largest
13 sample possible is most beneficial." Right?

14 A. Correct.

15 Q. Do you contend that Dr. Burch analyzed an
16 extremely small population in looking at black voter
17 turnout and white voter turnout in Mississippi?

18 A. When you look at the black voters, they're in
19 the 462 sample set, it starts to look small, yes.

20 Q. Do you know how many black respondents there
21 are of that 462?

22 A. I'd have to go back and look.

23 Q. If I represented to you that it's 160
24 respondents who were black?

25 A. That's sounds correct, yeah.

1 Q. And is that an extremely small sample size?

2 A. Well it depends again on the context of what
3 you're trying to do and what you need for confidence
4 intervals and margins of error and all that. So it's
5 hard, again, in general to say this is an extremely
6 small sample size or not. So in the context of this, it
7 may be the fact, and as I looked at it, that it could be
8 that it's a small sample.

9 Q. Well just to be clear, you don't see it's a
10 small sample, you say: "When a survey sample is being
11 used to analyze extremely small populations." Do you
12 contend that black voters in Mississippi are an
13 extremely small population?

14 A. No. The statement there is general. But what
15 goes on with the -- when you're using this, if you start
16 to get -- for example, if you're looking at Dr. Burch's
17 analysis, so let's look at somebody who might be, let's
18 say, black of a certain age, they're eligible to vote,
19 what their educational attainment is, you're starting to
20 drop the sample size down. So from the 462, you're
21 starting to go get down to small numbers.

22 Q. And did Dr. Burch analyze behavior by black
23 voters in a particular subregion with particular
24 educational and socioeconomic characteristics?

25 A. Well for the sake of Mississippi, she did.

1 Q. She looked at black voters in Mississippi?

2 A. Yes. And that was the point I'm just making.
3 Given the state as a whole, you can get down to small
4 sample sizes.

5 Q. And I just want to be clear. You're not saying
6 that black voters in Mississippi are an extremely small
7 population?

8 A. No, I'm not.

9 Q. And you say -- and maybe this is getting to
10 what you were saying before -- "Rare populations that
11 have unique combinations and characteristics tend to
12 have high weights that carry the risk of significant and
13 may disproportionally impact any statistic using those
14 respondents."

15 A. That's correct. And I'll give you an example
16 of it right here in the exhibit you gave me labeled
17 No. 25. Are you ready?

18 Q. Sure.

19 A. So let's look at the weights, and let's take
20 Case No. 320. I need a ruler to make sure I'm staying
21 on the same line here.

22 MR. WALLACE: Maybe this'll get you.

23 THE WITNESS: Thank you.

24 A. Let me know when you're ready.

25 Q. I'm ready.

1 A. So Case 320. The common weight is 7.2, the
2 common post weight is 14.298, the VV weight is 7.8, and
3 the VV weight post is 6.6. Those are really high
4 weights, and they're indications to me of exactly what I
5 was saying about if you've got weights that high, you
6 get down to subcategories of people that are so small,
7 you're weighting them up really highly. And that's
8 what's going on here.

9 Q. And I guess my question is: What are the
10 subcategories that you contend that Dr. Burch analyzed?

11 A. Well if she analyzed anything with these people
12 in it, then they have these weights on it. If she
13 analyzed Case No. 320, and I didn't see anything that
14 said she excluded it, that has a weight of 7.2.

15 Q. But you agreed previously that we use weights
16 in order to make the surveys more accurate and to true
17 it up to the characteristics of the population?

18 A. I understand that. But the -- as we said
19 earlier too, there's a lot of tradeoffs in this. And so
20 what you get is, if you've only got one person that fits
21 in certain categories and you have to weight that person
22 by a factor of 7 just on the common weight, it means
23 you're putting a lot of burden on that person. What
24 you've got is an inverted pyramid. So you've got one
25 person representing a whole set of people. And that's

1 what I mean. Whatever the categories were that they
2 took in detail that they decided they only needed to --
3 that they need to put a weight that big on the common
4 weight is really representative of the fact that there's
5 a lot of -- and this goes on and on throughout this
6 entire survey. You can see it. I mean, carry this one
7 over, you get into the common post weights for this
8 person, it's 14. This person's representing 14 people.
9 And when you look at the diagnostics on Dr. Burch's
10 logistic regressions, you can start to see that the
11 diagnostics and the differences in the DF betas, they're
12 all indicating that you've got outliers scattered
13 throughout this dataset that if you took one of them
14 out, your results change. And that's what that says,
15 and that's what the meaning of my statement is.

16 Q. And we'll just get into this, but just to be
17 clear, when you talk about the diagnostics, those are
18 diagnostics that you ran using the VV weight?

19 A. Or any other weights. But you can see them on
20 here, I just ran the VV weights. But using any other
21 weights, it's going to be very similar. I can tell from
22 experience and looking at weights and running
23 regression, all those diagnostic things are not
24 exclusively logistic regression, they're used throughout
25 all kinds of regression analyses, and I've used them.

1 You start seeing the matrix Ds, the Cook distances, the
2 DFFITS, the DFBETAs -- I'm sorry for all the acronyms --
3 you start looking at those things, and you start to see
4 how many of them are fairly large and you go, my
5 goodness, you take -- so here's the simple example.
6 Picture a diagonal -- you know, a 45-degree angle line
7 like this, all right? So you have a regression line,
8 all the data points on it, the R-squared on that's going
9 to be 1, you know, the X variable perfectly predicts the
10 Y variable. You could have an outlier up here in one,
11 okay. And so the regression line, the R-squared is not
12 going to be 1, it's going to be something else. You
13 took that one point out of there, and all of a sudden
14 it's 1. That's what these are indicating to you.

15 So there's a lot of -- because the case
16 sizes and whatever the categories are that the CES uses
17 are so small, however they did it, age, education,
18 whatever they all are that they weighted up to, whether
19 it's ACS or the CPS, you're looking at these weights
20 like this, my goodness, this -- you're putting a lot of
21 burden -- as I said, it's like an inverse triangle on
22 different people, such that if you took a few of these
23 cases out, you might get a totally different answer.
24 That is major problem I see with using the CES. Whether
25 it's exclusively to Mississippi, I don't know. So all

1 the arguments about the sample size being sufficient,
2 462, yes, in general you get what I said, 95 percent
3 confidence plus or minus 5 percent. But you start
4 getting down to these weights -- and it crosses them.
5 Doesn't matter if you use common weights, common post
6 weights, the VV weight, the VV weight post, you're
7 starting to look at things and go, my goodness, what
8 this starts to indicate to me, not only do you get
9 differences in how the FITS are, but how the parameters
10 are. The models can change dramatically, dramatically.
11 Sorry for the lecture mode. That's one of the big
12 issues I see with it.

13 Q. So -- and by the way, you referenced the CPS
14 and ACS. Those are also weighted?

15 A. Yeah, they're weighted themselves.

16 Q. And --

17 A. And then you're weighting to, you know -- so
18 it's becomes complex. And however all the process was
19 done to get to the point -- and I think the people who
20 put this study together did the best job they could and
21 I don't have any reason -- they weren't trying to bias
22 anything, they're trying to make a good survey that
23 people can use. But the point is, you get to things --
24 if all the weights were something like .094 and 2 and 1,
25 things like that across the board on all these, that

1 might be something different.

2 But my goodness, when you start to see
3 weights like I just noted 7, there's another one. So
4 No. -- I think it's No. 35, 7.39 common weight, 10 on
5 the common post weight, then it's 8 on the VV weight,
6 and it drops way down to 1 on this. I mean, you get all
7 kind of variations in this. And that really affects the
8 models and what you can do with it.

9 Q. So I understand your opinion that the weights
10 are high.

11 A. Well, it's not -- the weights are high. It's
12 not my opinion. When you run the diagnostics on the
13 logistic regression analysis, you can see it in the
14 diagnostic information. As I said, what are called the
15 DFBETAs, the differential change in the coefficients in
16 the model, the DFFITS, DFFITS is what it's called, the
17 differential changes in the FITS. In the Cook's
18 distance, how far are you moving away from something.
19 And they all apply, which indicates you've got a lot of
20 instability in the model.

21 Q. So this is -- you're anticipating my next
22 question. I had one other to ask, I'll go back and ask
23 you, but you run a Cook's distance test?

24 A. They're all -- all that stuff is in the output
25 that I put on the appendix in my report. It's all

1 there. I put up -- Dr. Burch did not put any of those
2 diagnostics in her report. All those diagnostics are in
3 my report.

4 Q. And you ran tests to measure the influence of
5 particular respondents on the survey?

6 A. They show it. That's what these lines are back
7 here.

8 MR. WALLACE: What page you're looking?

9 A. Well, pick one. Pick page 85. You know, I --
10 let me pick something that's -- let's go to page 77.
11 Are you ready?

12 Q. Uh-huh.

13 A. Page 77, top part, look at Case No. 460. So
14 remember, Burch dropped 2 out of her test, right, so she
15 ended up with 460.

16 Q. Correct. Because those are non citizens.

17 A. Right. So look across here, it says Cook's
18 distance C and Cook's distance C bar --

19 Q. Uh-huh.

20 A. -- do you see those? Look at the numbers on
21 these. And these are not the only ones. These start to
22 indicate to me that with these kinds of distances -- and
23 C means it's specific to. If you take this out, what
24 kind of change do you get -- and the Cook's distance,
25 C bar is an aggregate of it, you're going to start

1 getting big changes in what the parameters are. And the
2 parameters would be -- let me go to the front where you
3 actually get logistic regression models. Bear with me
4 while I go through page changes here. So where it says
5 here regression coefficients --

6 MR. WALLACE: Which page?

7 A. Okay. I'm sorry, page 21.

8 MR. WALLACE: OKAY.

9 A. So when you start -- these are the --
10 basically, this is her model that I replicated. You
11 know, I'd have to look at this in detail. But what I'm
12 talking about is in general, those numbers. And that's
13 what generates the estimates. Is this going to be in
14 category 1, the validated voter or not a validated
15 voter? Those numbers can change dramatically.

16 And so I -- she didn't provide any of this
17 kind of residual analysis in her report -- let me
18 finish -- and when I ran them, it looked to me like
19 there's a lot of instability in the dataset itself and
20 it probably has to do a lot with the weights. You know,
21 that's just my hypothesis at this point. Such that if
22 you pull certain people out or if something changed
23 smally (sic), you can get a big change on what the model
24 looks like including the parameters, whether or not it's
25 statistically significant, all sorts of issues like

1 that.

2 And I didn't see anything in the literature
3 about any of these issues. So when I looked at it
4 myself having had the experience with exactly doing this
5 with every form of regression analysis I run, you start
6 going, my goodness, this -- there's a lot of instability
7 in the dataset itself.

8 Q. And just looking at page 21 here, what is it
9 here that you were relying on for the statement that if
10 you changed a few of the respondents, you'd get a
11 different result?

12 A. What I'm saying is, see -- page 21, see where
13 it says odds ratios? Where it says, independent
14 variables, see where it says intercept, black and other
15 race? Those are the variables she used in her model.
16 Then move over, see where the column that says had
17 reduction coefficient, see where it says B and then in
18 parenthesis i, B1, B2, B3. The intercept value is .25,
19 the black coefficient is minus 0.354, the other rates is
20 minus 1.24. These are the ones that generate whether --
21 this is what generates are you going to be placed in the
22 category of the validated voter or a nonvalidated voter;
23 right? But if you start getting the .25 because you
24 pull out of the real influential places on there, that
25 could change -- I'm just hypothetically making this up

1 to show you -- that could change to .3 from .25, could
2 change to .4. The minus 5.4 could change -- the point
3 I'm trying to make is, you could get number changes from
4 this that then put something in a different category.

5 That's what I mean by the dataset looks to
6 me with those kinds of weights -- and when I looked at
7 the residual analysis, that is diagnostics from all the
8 standpoints I know how to look at it from given that you
9 had a multidimensional problem, you've got an issue.
10 Here's another issue. This is called a ROC curve --

11 MR. WALLACE: Which page?

12 A. I'm sorry. Page 37. Receiver operating
13 characteristics. Do you follow me where it says rock
14 curves, combined and separate. That diagonal line is if
15 there's no explanation in something as you're going on.
16 What the ROC curve shows you is as you start to get up
17 to certain probabilities of predicting correctly not
18 having a -- what's the term they use, a type 2 error,
19 there's another term they use in the medical profession,
20 but it's a probability -- it's mislabeled. So you're
21 correctly predicting it's going to be head and it turns
22 out to be head. But if you're correctly predicting a
23 head and it turns out to be tails, you've made an error.
24 Do you follow me?

25 So what you ideally want to see in a ROC

1 curve relative to this diagonal line is a line that's
2 almost vertical going up from zero here as high as it
3 goes and then goes across like this. What that means
4 is, hey, I can get up to a real high probability of
5 being correct with still maintaining a low probability
6 of it going into the wrong category. And what these ROC
7 curves show to me is that her model is not much
8 different than the diagonal, it's not doing that. At
9 every level, she's getting probability of predicting
10 incorrectly, and she has probabilities of correctly
11 predicting. That to me is not --

12 Q. Well it's not equal, it's the same. I think in
13 your report you say --

14 A. If it would be equal, the same, but it is
15 almost the same. You go back to the one point in my
16 report where I said her classification system only gets
17 something like 54, 50 percent.

18 Q. You said 57 percent.

19 A. Yeah. That's not very good.

20 Q. With one variable getting a --

21 A. Well, her model --

22 Q. -- heads or tails?

23 A. -- right -- right there, just her model in
24 general, 57 percent. I could flip a coin and say every
25 time I'm going to flip it, I'm going to get heads. I'm

1 right 50 percent of the time. And if you look at people
2 who recommend using logistic regression, if you're down
3 to 50.57 your model does correctly, you look at the ROC
4 curves and everything else, it's suggests to me that the
5 model is not very good. And I think it's not that she's
6 necessarily flawed on trying to run logistic
7 regression -- I don't know the answer to that -- but I
8 think it reflects a lot of problems in the stability of
9 the dataset. Does that help?

10 Q. You don't think that there's any reason why the
11 weighting that was applied by the CES is not accurate in
12 terms of trueing up this sample to the ACS or CPS?

13 A. Again, I stress the fact when you get down to
14 categories of people. What's their age? What's their
15 race? What's their educational attained? Whatever else
16 they've collected in that survey, that's what they're
17 trying to match back to, all those characteristics in
18 either the CPS or the ACS. And you start getting to
19 also, okay. You have 462 people. How many are black?
20 167. How many have an educational attainment of --
21 okay, now you're down to 90. How many have this, you're
22 down to 80. How many have that, you're down to 50,
23 you're down the 40, you're down to 30. You're down to
24 small numbers. And you go, okay, to get it up correctly
25 so we have the right distribution of people relative to

1 what we see in the ACS or the CPS, we've got to assign a
2 weight. In some cases, they're pretty low, they're not
3 much; but in some cases, in quite a few of them, you've
4 got some tremendous weights when you start looking at
5 them. One person's representing 7 people? And I think
6 one of them that I found when I looked through this
7 earlier had a weight of 14.

8 Q. But again -- I just want to be clear on this --
9 you're not saying that weighting is inaccurate in terms
10 of doing what it is supposed to do and conforming the
11 characteristics of the sample to the characteristics of
12 the general --

13 A. I'm not saying that. The tradeoff in doing
14 that is, you get an unstable model when you're --
15 because of those weights that -- and I think -- I can't
16 attest to exactly that's the whole problem with it, but
17 when I looked at the diagnostics that I ran and saw what
18 I saw, I'm telling you there's a problem with the model.
19 And my guess is, it reflects the facts that you've got
20 what I would call influential outliers. And those
21 influential outliers are the people with really large
22 weights.

23 Q. Well, I mean you say that there are indications
24 of instability in the model, but you also agreed that
25 the CES, I believe we said, is a reliable source of data

1 on voting at both the national and state level?

2 A. Did -- when they designed the CES, did they
3 design it necessarily to run with logistic regression?

4 No. What they designed those samples for is, they want
5 to be representative of the population. Researchers are
6 out looking for datasets to use. So when they go out
7 looking for datasets to use, they may not be expressly
8 designed for the datasets we're using. Can I finish?
9 You look like you're yawning because I'm lecturing, or
10 else --

11 Q. No, no, no.

12 A. I couldn't tell.

13 Q. I was opening my mouth. Go ahead.

14 A. Thank you. So the datasets initially are not
15 designed for that, they're designed to say it's
16 descriptive, here's what we think is going in on the
17 United States or this state or some place at this point
18 in time. The researchers have got to pull those
19 datasets out to use them. And so again, I go back to
20 the point you've got tradeoffs. Yes, we made it so it
21 represents a population and if you look at it just as it
22 is, we think it did a pretty good job. We can say we're
23 95 percent certain within plus or minus 5 percentage
24 points. Then you go and start to do for a research
25 question or a model building session, and all of a

1 sudden you realize, I've got weights in here that are
2 1 person's equal to 14 or 7. Well, that may or may not
3 be a problem until I run something I'm trying to do, and
4 then I'm looking at the diagnostics, as I've shown the
5 examples of, and the diagnostics I ran indicate to me
6 they're -- you've got a lot of instability, and I think
7 it comes -- stems from the weights that are on these
8 relative to the sample size. And it's because you're
9 not using a sample that was designed to be -- all the
10 samples are designed to be somewhat representative of
11 the populations, but they're not necessarily designed
12 for people to run models on.

13 Q. You talk about running models. You would agree
14 that Dr. Burch did not only conduct a logistic
15 regression analysis but also arithmetically reported the
16 percentage of validated voters based on race in
17 Mississippi?

18 A. I agree.

19 Q. And her numbers reporting those arithmetically
20 are the same as the numbers that she obtained through
21 the regression analysis?

22 A. They -- when you look at the -- when you look
23 at, like, the percent voters on the same, look at it
24 that way, how I would characterize that is, you didn't
25 have to go through the regression analysis to aggregate

1 back up. She had the data to start with in the
2 beginning. She had it. Just run a simple t-test on it.
3 Do you follow me? You have the ability -- it'd be like
4 saying, okay, I've got household level data, income
5 level, all right, and I also have the income levels of
6 everybody in the household, six people. I'm going to
7 build a model now that accurately estimates what their
8 incomes are, and I'm going to add that up to get the
9 household level data. Why would you go through the
10 individual people if you already got the top. And she
11 could have just done a t-test at the beginning, and I
12 believe had she done so, the results would have said,
13 yes, it looks like there's a higher percentage of white
14 voters than there are black voters that actually went
15 out to vote and all that. But the results are
16 statistically not significant. You can't tell the
17 difference on them because the margins of errors or so
18 wide.

19 Q. And you didn't run that t-test?

20 A. I did.

21 Q. You didn't run t-test on top line numbers --

22 A. Yes, I did.

23 Q. -- that she obtained.

24 A. I didn't put it in my report. If you're asking
25 me if I ran one, I ran one at one point in time and said

1 to myself why did she run a regression analysis to get
2 back up to this point? Why didn't she just do a t-test?

3 Q. And you did run a t-test.

4 A. Yes.

5 Q. You didn't include it in your?

6 A. I didn't.

7 Q. Why not?

8 A. I just didn't think about it at the time, that
9 it was important.

10 Q. Can you provide it?

11 A. I can, yeah.

12 Q. Okay. And just while we're on the subject, you
13 talk about those four respondents that you identified
14 with those high weights?

15 A. Well and there's more, I just picked them out
16 just glancing through the set.

17 Q. And you say they form a potentially influential
18 set of cases in this small sub sample Dr. Burch's used
19 in her analysis?

20 A. In the entire sample for State of Mississippi,
21 somebody with a weight of 14 or 7, the residual
22 analysis, that is, how good is the model analysis I
23 performed on her logistics model and looking at the
24 logistics model I ran indicate to me that in however you
25 want to look at it, this dataset is such that with those

1 high weights, you can really create some instability.

2 It's instable, the models you're getting.

3 Q. And when you say "unstable" or "instability,"
4 what do you mean?

5 A. I mean by this. Again, I'll -- I have to
6 visualize this. So you've got an X by Y grid. So the X
7 values are down here in this dimension that you're using
8 to predict something. This is standard just two
9 variable regression analysis. If you've got a diagonal
10 line this like and all the dots on your observations fit
11 it, you've perfectly predicted Y from X. If one of
12 those dots, though, is non on line, it's up here, it's
13 going to pull the regression line up. It's influential.
14 Everything is along this line and that's way up here,
15 that's an influential observation such that it may say,
16 okay, now you're R-squared, your coefficient of
17 determination is, say, .87 let's say .85, whatever it
18 might -- you pull that observation out, and it's a 1.
19 And the coefficients will change dramatically. I can't
20 visualize that because when you use two variables or
21 three, all of a sudden you're, you know, three space --
22 two space or three spaces or four space, so you can't
23 see it.

24 But what I'm saying is, all these
25 diagnostics in there, Cook's distance, DFBETAs,

1 DIFFITs, different FITs, there's saying there's a lot
2 of observations in here that if you take them out, all
3 of a sudden you're going to get some big changes in both
4 the model parameters and how well the data fit according
5 to the model which indicates to me there's a lot of
6 stability in the models. If she decided or someone else
7 decided the people that were pulled out that were not
8 citizens, if for some reason one other thing -- one
9 other person was pulled out that had a high weight, the
10 model would look completely different.

11 So that's what I mean about I think the
12 dataset itself for Mississippi looks to me that it's not
13 really the best dataset to use to try and develop
14 models.

15 Q. And understanding -- well, strike that.

16 Did you take out these four voters you
17 identified or some other respondents and sort --

18 A. No. Once --

19 Q. -- of see what the effect would be?

20 A. No. Once -- well, I can see the effect, see it
21 already in here. It's telling you what the effects are.
22 In general, it's the summary of what you're going to
23 see. You're going to get dramatic changes in them. And
24 I didn't pull them out and do that. Once I looked at
25 the diagnostics, I could see, yes, this is -- these are

1 not good signs for building a model.

2 Q. But you're not able to say what the precise
3 effect would be or if you used different weighting,
4 whether you --

5 A. Well, you could say what the effects are going
6 to be in terms of the diagnostic measures, they're
7 telling you. That's what they indicate. But if I pull
8 them out, then that would be the next step. So I can go
9 ahead and pull them out, but --

10 Q. You didn't do that?

11 A. No, I didn't do that. There's a lot of them
12 that would end up pulling out because of the weights in
13 them to start looking at them. And I could use this as
14 a guide to see which ones and see how much they change,
15 but I didn't do that. But the indications are, I'll
16 stress, that you've -- and people read -- talk to
17 somebody else who knows something about regression
18 analysis, if you look at it, they're going to yes, the
19 potential is there that this model could really change
20 in parameters and/or the FITTS, the model estimates of
21 the data or both. And that's not a good sign for a
22 model.

23 Q. And again, you're referencing model. When you
24 say "model," what you're talking about is using this
25 data in some type of regression?

1 A. Like the two logistic regression analyses.

2 Q. But again, Dr. Burch conducted other analyses
3 that were -- with the CS data that were not --

4 A. Well, then --

5 Q. -- logistic regression analysis?

6 A. -- they -- whether or not that affects it, I
7 don't know enough about King's ecological inference
8 model, if that's what you're going to go to next. But
9 that could be the case too. I just don't know enough
10 about that model to diagnose it.

11 Q. And I wasn't talking about that all -- we'll
12 get into it --

13 A. Okay.

14 Q. -- I again mean just sort of her arithmetically
15 calculating voter turnout by race, using the survey
16 responses in the weighting without --

17 A. As opposed to what she did in her first report
18 wherein she included the population under 18 in her
19 numbers.

20 Q. Yeah. I mean --

21 A. She's not made that kind of mistake here in
22 that regard other than the fact she put one county into
23 district 1 that shouldn't have been there and another
24 one out of it. But yeah, it looks to me like she pulled
25 the dataset correctly. And it's not her fault there, it

1 looks to me it's just a condition of the dataset.

2 Q. When you say Dr. Burch concluded ignoring the
3 warning found at the CES study guide. "We advise
4 caution when analyzing very small subsamples as random
5 measurement error may lead to faulty inferences about
6 analyzing very small subpopulations."

7 A. Yeah. And I may not have expressed that in the
8 best way, but what I'm getting at is the fact that what
9 I just said, there's -- some of these categories of
10 people of white, male, age 18 who has a less than a high
11 school education X, Y, Z, and you have the bond
12 (phonetic) to it, all of a sudden you're not at whatever
13 the white count was of voters, you're down to a really
14 small number. And then they're trying to match that
15 either or both to the American Community Survey or the
16 Current Population Survey, and suddenly you've got a
17 really small number -- a sub sample that gets a
18 tremendous weight.

19 Q. And so if you were analyzing that very small
20 subpopulation like a white, you know, person of a
21 particular age, education, you know, geographic
22 location, etcetera, that's where that warning that you
23 reference would come in?

24 A. Yeah. And then what happens is, in general
25 when you're modeling, you have those kinds of conditions

1 because weights are set on those small categories, the
2 subcategories, and you start seeing, okay, I can see it.

3 Whatever the categories were for that person, the fact
4 that you've got a weight of 14 or 7 or 9, says you're
5 dealing now with really small sub samples that are part
6 of your larger sample, and it's going to affect what
7 you're going to do because they've got these weights on
8 them.

9 Q. But that isn't what this warning from the study
10 guide is talking about; right? They're talking about
11 when you analyze the very small subpopulation, when you
12 break it out of the survey, not the mere fact that that
13 subpopulation is included among the larger population
14 that you're looking at?

15 A. Well, you know, it's hard to say. These people
16 run models, don't they, they built the study, you just
17 cited one of them in a study you showed me. They're
18 building models. So maybe they understand those issues
19 and maybe the way they worded it was not so great, and
20 what they're talking about is, you need to be careful
21 because of these issues, and that's their way of saying
22 that. I can't speak to them. You'd have to ask them.

23 Q. So you don't know whether their meaning was the
24 one that you're interpreting?

25 A. Right. Or both. You know, the way you're

1 interpreting or both, yeah, I don't know.

2 Q. And just looking at the page that you're
3 referencing there when you look at that, this is on page
4 23 of the study guide.

5 A. Of their study guide.

6 Q. Of their study guide --

7 A. Right.

8 Q. -- right.

9 A. Where they say be careful of the
10 subcategories --

11 Q. Correct.

12 A. -- that's what I'm referencing.

13 Q. And they then say: "Follow the link for more
14 information about this issue," and they cite an article.
15 Did you look at that article?

16 A. Yeah, I can't remember if I did or not, no.

17 MR. SAVITZKY: Well, let's mark it. Getting
18 down to the end here.

19 MR. WALLACE: On that subject, we started
20 before 9:00, we took out a little less than an hour for
21 lunch, and about ten minutes for me to check out. So
22 giving you those breaks, I think we're done by 5:00. If
23 you count it differently, let me know.

24 MR. SAVITZKY: You tell me.

25 MS. JONES: One hour and 11 minutes. So

1 almost one hour, ten minutes.

2 THE WITNESS: That's 5:00.

3 MS. JONES: And that's a rough.

4 MR. SAVITZKY: Yeah, so probably closer to
5 5:20-something but --

6 MR. WALLACE: No. We started before 9:00,
7 but, you know, if you get there and we've got one
8 question left, that's one thing. If you're starting a
9 new subject, we're going home.

10 MS. JONES: So we -- can we go off the
11 record to talk about time?

12 MR. SAVITZKY: Let's go off the record for
13 one second.

14 (Discussion held off the record.)

15 MR. SAVITZKY: Back on the record. And I'll
16 mark as Exhibit 26 the article that's linked there in
17 the study guide.

18 A. Yeah.

19 Q. And you looked at this article?

20 A. Let me refresh my memory. I did.

21 (Witness reviewing exhibit.)

22 A. And in general, this article, again, goes to, I
23 think, the definition of small sample sizes, subsamples
24 that you were describing. But the fact that these
25 people also built models in the same vein as logistic

1 models would suggest to me that they might even be
2 saying in there even though it's not stated that
3 precisely that you need to be careful using some of
4 these data because of the weights. I mean, I found it
5 amazing, and I can't say I read every page exactly, but
6 I don't recall seeing a super warning anywhere in this
7 dataset about the fact you may run into high rates,
8 really large weights, and then being careful to use it.
9 Did I miss something?

10 Q. No. They represented it or they say they
11 trimmed the weights at 7 for the common and 14 for the
12 post, I think?

13 A. Yeah, that might be it. That's about it. But
14 those are some big weights in a survey, in my opinion,
15 in my experience as with surveys.

16 Q. But you're not saying that they're inaccurate
17 based on what they're trying to attribute --

18 A. No.

19 Q. -- to the population?

20 A. No, no.

21 Q. And just looking at the article that we just
22 marked as Exhibit 26, you would agree that what the
23 authors there talking about and what the warning that
24 you reference in your report is talking about is
25 analyzing the behavior of relatively rare individuals in

1 a population; in other words, if you were looking at
2 black voters of a certain age, etcetera, etcetera, and
3 looking at that and looking at the behavior of that
4 subpopulation, not the mere presence of the
5 subpopulation in the sample?

6 A. But -- well that gets to my point. If they're
7 warning about looking at people like that that are
8 really a small sample and that's in your dataset and
9 they have a large weight, they could affect what you're
10 doing to build a model. That goes back to the point I'm
11 making. So maybe that's what they meant. They didn't
12 state it precisely, so I can't speak to what they
13 thought they were saying. But after running the
14 analysis and looking at all this, it sure indicates to
15 me that they've got weights in there that are so large
16 and they're so many people with such large weights that
17 you get a lot of instability in the models you're trying
18 to construct from if you're trying to do regression type
19 models.

20 Q. If you're trying to do regression-type models?

21 A. Yes.

22 Q. But if you're not doing the regression-type
23 models, this instability is less of a concern?

24 A. I don't know. It depends on the context of
25 what you're trying to do with it. It might be a

1 concern. For example, if you're doing a t-test and if
2 one of the persons was pulled out of the sample, that
3 makes a difference in the test score, it could make a
4 big difference.

5 Q. Now turning to Dr. Burch analysis of the CES in
6 her rebuttal report which was marked as 18, Exhibit 18,
7 and looking at page 5, she reports the CS team was able
8 to validate that 53 percent of the respondents voted in
9 the 2020 general election.

10 A. I don't have it in the front of me, but I
11 believe you if that's what she said.

12 MR. WALLACE: Which page?

13 MR. SAVITZKY: Page 5, last paragraph.

14 Q. And you don't dispute that using the common
15 weight weighting, that's accurate?

16 A. No, I don't.

17 Q. And you don't dispute that that's fairly close
18 to the 58.7 percent turnout reported by the secretary of
19 state in the official totals?

20 A. That's correct. I don't dispute that.

21 Q. And on page 6 of her rebuttal report, Dr. Burch
22 reports that breaking this -- and this is the first
23 sentence on the top of that page: "Breaking the CES
24 data down further by race, 60 percent of white
25 respondents and 46 percent of black respondents voted in

1 Mississippi in the 2020 election." Again, you don't
2 dispute that using the common weight weighting, that's
3 accurate?

4 A. That's correct.

5 Q. And Dr. Burch reports that she conducted a
6 logit regression analysis, she said: "My regression
7 analysis validated turnout by race, and the CES confirms
8 these percentages finding the same large statistically
9 significant gap between black and white Mississippi
10 voters."

11 A. That's right. Brings into play all the
12 criticism I have of the dataset when using logistic
13 regression.

14 Q. But you don't dispute that that is the result
15 of the logit regression analysis run on the data?

16 A. No, I don't despite that.

17 Q. And you don't dispute that that matches up with
18 what simply arithmetically calculating the validated
19 voting for black and white voters in the --

20 A. I don't dispute that.

21 Q. Okay. And looking at paragraph 29 of your
22 surrebuttal report, you say Dr. Burch does not describe
23 the fit of her model to the data and whether or not any
24 of the assumptions underlying logistic regression, it
25 would suggest the regression model was violated?

1 A. Correct.

2 Q. And you don't cite any support for the
3 suggestion that a goodness-of-fit test is required for a
4 binary login analysis?

5 A. Well it's my oversight, but I assume that
6 anybody who runs a model understands that it should have
7 a good fit if you're going to use it. So that was my
8 mistake in not citing a whole bunch of references saying
9 that you should use it, because my understanding with
10 every researcher, the idea is, you have a model and you
11 should report what it looks like. I just thought that
12 would be common knowledge, so my error.

13 Q. Would you agree that model diagnostics can
14 create as many problems as they solve?

15 A. Well depends on --

16 MR. WALLACE: I guess I'll object to the
17 form, but he my answer.

18 A. I guess it depends on what the problem is. So
19 if you're trying to build a model to argue something and
20 the diagnostics suggest you don't have a good model,
21 that would be a problem, if you follow what I'm saying.
22 And if you're trying to build a model that's exclusively
23 designed to do something and the model says this is not
24 very good at doing that, it's a problem, if it -- if it
25 means that. You look at the diagnostics and it's going

1 to create other problems, more generally I would see the
2 problem that's being created and it's telling you you
3 should probably not use this model or look for other
4 variables or use some other different approach.

5 Q. Would you agree that there's no distributional
6 assumption for a binary logistic model?

7 A. I can't remember what the distributional
8 assumptions are on binary logistics models, if there are
9 ones or not, I just can't recall if it's assuming some
10 sort of distributional function. And there may be
11 different algorithms through different approaches to
12 logistic regression that do assume them and some that
13 don't.

14 Q. Would you agree --

15 A. I don't know the answer to that off the top of
16 my head.

17 Q. Would you agree that in a model where there's
18 no distributional assumption, it would make less sense
19 to use a goodness-of-fit diagnostic?

20 A. No, I wouldn't agree to that. I mean, any kind
21 of model would -- this is semi lecture mode. So in any
22 model, you've got -- two out -- you're doing one of two
23 things, really. You're trying to predict something or
24 you're trying to have a causal explanation as best you
25 can with the model what the determinants are on

1 something. And it -- it looks like she's doing both in
2 some of these models. But basically, it's -- the
3 overall focus is on prediction. And if you're going to
4 predict something, that is, you're going to classify
5 people into one group or another group, then you need to
6 be very careful about how well your model fits. It may
7 be less important if you're focus is on you're trying to
8 explain things. It may be that you've got a really low
9 explanatory power in your model but it's sufficient to
10 say I think this variable, whether or not you've
11 completed high school, has a fairly large effect on what
12 your future income's going to be at age 50. That's a
13 different story. But if you're trying to put --
14 classify and correctly put things, you better have a
15 model that fits well; otherwise, you get things like
16 where it said right in here where I said classification
17 system's only .57, it's not better than just, you know,
18 randomly tossing a coin and saying every time I'm going
19 to say heads and I'm going to be right 50 percent of the
20 time. And that part is definitely in the literature
21 about saying if you are not well over that, you don't
22 have a very good model. And that's consistent with all
23 the diagnostic things I looked at, that the model is not
24 particularly good.

25 THE REPORTER: I think we lost everybody on

1 Zoom.

2 MR. WALLACE: Hold on.

3 MR. SAVITZKY: Let's go off for a second.

4 (Discussion held off the record.)

5 MR. SAVITZKY: Back on the record.

6 BY MR. SAVITZKY:

7 Q. And did you run those model diagnostics
8 yourself?

9 A. Yes.

10 Q. That's what you were talking about earlier?

11 A. Yes. The examples I pointed to are all models
12 I ran. I replicated her model first and then said here,
13 if I put these different weights in, here's what you
14 get.

15 Q. In your surrebuttal report, you say that
16 Dr. Burch's analysis was wrong because she should have
17 used the -- she should not have used the common weight
18 weighting?

19 A. Yes, that's what I said.

20 Q. Do you still agree with that?

21 A. I -- I might revise that. I think it's still
22 better to have used the weights that I ended up using in
23 the suggesting.

24 Q. And you said in your report -- and again, if
25 you want to revise that and back off that statement, we

1 don't have to get into it, but --

2 A. Yeah. And I just said yes, I think she's not
3 as incorrect as I thought she was initially when I read
4 it.

5 MR. WALLACE: Let's get what paragraph we're
6 talking about so we know what you're revising.

7 Q. Let's talk about paragraph 37 in your rebuttal
8 report. You say --

9 A. Yes.

10 Q. -- "Because Dr. Burch uses the validation
11 variable in her logistic model, she should have used the
12 common post weight weighting because she's reaching
13 across to the postelection wave with a validation of I
14 voted takes place." Right?

15 A. Correct.

16 Q. But as we discussed, the validation is done
17 independently of the postelection wave questioning?

18 A. That's correct.

19 Q. There are numerous validated voters, as we went
20 through, who did not answer the postelection wave and
21 who are omitted from common post weight; right?

22 A. Correct.

23 Q. So Dr. Burch was not reaching across to the
24 postelection wave, she was analyzing a variable
25 validated voting that applies to the entire sample?

1 A. That's correct.

2 Q. And because she was looking at the entire set
3 of 462 or 460 minus the non-citizens respondents, common
4 weight which is used for all adults where none of the
5 variables from the postelection wave of questions being
6 studied was the correct weight to use?

7 A. That is correct.

8 Q. And that is what I was referring to which
9 should be corrected.

10 And turning back to Dr. Burch's rebuttal
11 report on page 6, she then discusses another analysis
12 where she looks into overreporting. And we can --

13 A. That's Exhibit 18 again?

14 Q. Correct. So Dr. Burch first looks at -- she
15 concludes that 60 percent of white respondents and
16 46 percent of black respondents voted in the city based
17 on the CES data, and then she also said: "It's worth
18 noting the CES allows us to examine overreporting of
19 voting." Right? So she looks at what is turnout by
20 race, and she also looks at overreporting; right?

21 A. I believe that's correct. So we're on page 6;
22 right?

23 Q. Page 6, the paragraph at the bottom under the
24 chart.

25 A. Yes, yes.

1 Q. Right? So she's -- having looked at sort of
2 what are the CES numbers show from (inaudible) she then
3 says we can use this data to examine overreporting of
4 voting by black voters and white voters; right?

5 A. She states that, yes.

6 Q. And she says the CES -- excuse me. The CES
7 allows us to examine overreporting of voting by
8 comparing self reported voter turnout to validated voter
9 turnout; right?

10 A. Correct.

11 Q. Conceptually that makes sense; right?

12 A. Yes.

13 Q. So what she's doing, she's looking at
14 respondents who reported voting in the second wave of
15 questions, and she's seeing how many of those folks were
16 actually independently validated as having voted; right?

17 A. That's, I believe, what she was doing, yes.

18 Q. And because this time she's looking at a
19 variable from the postelection wave of questions, she
20 uses the common post weight weighting as she notes in
21 Footnote 22; right?

22 A. Yes.

23 Q. Okay. And Dr. Burch reports that 74 percent of
24 white Mississippi respondents who said that they voted
25 in the second wave actually did so according to the

1 independent validation; right?

2 A. I believe that's correct, yes.

3 Q. And you don't dispute that?

4 A. No.

5 Q. And she says that by contrast, 57 percent of
6 the black Mississippi respondents who said they voted on
7 the second wave were actually validated?

8 A. That's correct.

9 Q. You don't dispute her numbers on that?

10 A. No.

11 Q. And you replicated them, actually?

12 A. Yes.

13 Q. And you agree that using a common post weight
14 weighting, they're accurate?

15 A. Yes.

16 Q. Now, at pages 8 and 9 of your report, your
17 surrebuttal report, you say that: "Rather than using
18 common post weight for this analysis comparing reported
19 voting to validated voting, Dr. Burch should have used
20 VV weighted post." Do you also want to revise that
21 assertion?

22 A. Yeah, I think she still should have used it,
23 but I think you're correct, that's a mistake I made.

24 MR. WALLACE: It's on page what?

25 THE WITNESS: 8 and 9.

1 MR. WALLACE: Of yours.

2 THE WITNESS: Correct.

3 BY MR. SAVITZKY:

4 Q. Right. And we discussed the VV weights only
5 include people who were independently validated as being
6 registered?

7 A. Correct.

8 Q. And that would mean excluding people who were
9 reported -- who reported that they voted on the second
10 wave of survey question but, in fact, weren't registered
11 and didn't vote?

12 A. Correct.

13 Q. And if you're trying to detect overreporting,
14 you're going to exclude potentially a lot of
15 overreporting that way?

16 A. Correct.

17 Q. And by the way, do you know if there were
18 respondents like that in the sample who reported voting
19 but in fact were not registered and were excluded from
20 the --

21 A. I believe there were. I would have to go back
22 and look, but I believe there were instances like that.

23 Q. And we actually -- I mean, can look at them.

24 A. We can.

25 Q. Just briefly, we can pull back out what's

1 Exhibit 25. And just starting with row 29. Tell me
2 when you're ready?

3 A. I'm ready.

4 Q. And this is a person who on CC2401, the
5 question whether they voted, they said I definitely
6 voted; right?

7 A. Yes.

8 Q. Voter status N/A, no validated vote and the VV
9 weight given the zero weight --

10 A. Yes.

11 Q. -- and they are excluded?

12 A. Yes.

13 Q. 47 is another one on this page, right, I
14 definitely voted.

15 A. Yes.

16 Q. No validated vote, no registration, no weight
17 in the VV weights?

18 A. That's correct.

19 Q. And we could go through those. Would you
20 dispute it if I told you there are 45 respondents in the
21 Mississippi sample who said that they voted but whose
22 registration was not independently validated?

23 A. No, I believe you. I believe that that --

24 MR. WALLACE: Registration or voting was not
25 validated?

1 MR. SAVITZKY: Well, neither.

2 A. Neither, yeah.

3 Q. You wouldn't dispute that it's 45?

4 A. No.

5 Q. And there were 15 instances that you found of
6 overreporting by respondents whose registration was
7 validated?

8 A. I believe that's correct.

9 Q. And you discuss in your report how with only I
10 think it was six white voters who over -- registered who
11 overreport and only 9 black voters who overreported,
12 that's a example of the small samples?

13 A. Exactly.

14 Q. But in fact, the total numbers of respondents
15 who overreported is not 15, it's 60?

16 A. But even when you have the denominators in
17 there, I think I -- didn't I perform a t-test there?

18 Q. Well, you performed a t-test on looking at that
19 six versus 9.

20 A. Right. But there's not -- there's a
21 denominator in there, that that's the key point. That's
22 the 6 versus 9, so the sample is still small, and it's
23 indistinguishable. It's not just the fact that it's 6
24 to 9 -- what's the paragraph number? And I can be more
25 accurate on that.

1 Q. I believe it's paragraph 25.

2 A. Yes. So the test is not 6 versus 9, it's 6 out
3 of 140 and 9 over 61. That's the test. That's what
4 gives you the percent, that's the mean. And that --
5 when you ran that test with those numbers, 6 over 140
6 and 9 over 67 and run a t-test on it, are the means the
7 same, yields the result, you know, with a alpha level of
8 .05 that you cannot distinguish statistically between
9 the two groups.

10 Q. But as we've established, the numerator and the
11 denominator are all based on the VV weight -- or rather,
12 the enumerator is based on the VV weight, and the
13 denominator is too.

14 A. Yeah, I think it's consistent in this. I'd
15 have to look at the details of it, but I ran it
16 consistently, I believe. And so when you look at it
17 that way, it just says they're =not statistically
18 significant.

19 Q. Right. And my point is that you ran that
20 t-test using the weighting that excluded most of the
21 voters who overreported?

22 A. I'd have to go back and look at it to -- but
23 you may be right.

24 Q. Well, we just discussed that you used the VV
25 weight?

1 A. That's correct.

2 Q. And that we just discussed the VV weight would
3 exclude 45 of the 60 respondents who overreported
4 voting?

5 A. Yes.

6 Q. So you ran your t-test on data that excluded
7 most of the people who overreported?

8 A. And to answer the question -- to answer the
9 question you're asking, I -- we could run it again with
10 the different denominator and see what happens. It may
11 be a different result or the same.

12 Q. Well, let's answer the question I did ask. You
13 ran your t-test on data that excluded most of the people
14 who overreported voting; right?

15 A. That could be the case, yes.

16 Q. I think a yes or no would be proper --

17 A. Okay. Yes.

18 Q. -- to be objective. Yes; right?

19 A. I'll say yes.

20 Q. Thank you. And you didn't run a t-test on the
21 data using the common weight which would have included
22 most of the overreporting in the sample; right?

23 A. That's correct.

24 Q. So you don't know whether the level of
25 overreporting that Dr. Burch reports using the correct

1 weighting is statistically significant?

2 A. I don't know.

3 Q. Almost done with the CES, couple other points.

4 First, you say in paragraph 28 of your
5 surrebuttal report: "In her use of CES data because it
6 has validated voters, Dr. Burch analysis is again tied
7 to the CPS." Right?

8 A. Yes.

9 Q. Dr. Burch didn't use the VV weights in her
10 analysis in the --

11 A. Then that's incorrect. So it's just tied to
12 the ACS.

13 Q. So this statement that Dr. Burch's analysis is
14 tied to the CPS is not correct?

15 A. That's correct.

16 Q. And turning to pages 7 and 9 of Dr. Burch's
17 rebuttal report. Dr. Burch uses CES data to analyze
18 education in voting; right?

19 A. Where are we?

20 Q. Starting at page 7 of Dr. Burch's rebuttal
21 report, which I believe is Exhibit 18.

22 A. Okay.

23 Q. Are you there?

24 A. I am.

25 Q. Okay. And you don't discuss this analysis of

1 educational -- education voting in your surrebuttal
2 report, do you?

3 A. But you -- one of her models in the logistic
4 modeling that she did is with this dataset, correct, her
5 model 2?

6 Q. That's correct.

7 A. So that I did analyze.

8 Q. You don't dispute her analysis on page 7,
9 Figure 2 of page 8 that there's a small, not
10 statistically significant gap between black and white
11 validated voter turnout at each educational level?

12 A. You're talking about what she's got in
13 Figure 2 and Figure 3. No, I'm not disputing that. The
14 only qualification I make to it, again, is even with
15 doing some descriptive statistics, she may run into
16 issues with the weighting if you looked at it. But no,
17 I don't dispute it.

18 Q. But you don't dispute that her analysis
19 indicates that education is the significant explanatory
20 variable in explaining the difference in turnout between
21 black and white voters?

22 A. I think she's making a leap of faith in that.
23 Causal analysis is really hard to determine through
24 correlations. They're correlated, but to say it's
25 specifically the causal effect is difficult. And that's

1 one of the things you run into with regression analysis
2 of any type or even descriptive analysis.

3 Q. I'm looking at page 16 of her report. I mean,
4 she reports that the P value on education is significant
5 at the .001 level for voting?

6 A. But even that -- all that does it say the model
7 fits well, doesn't say that that's a consolation.

8 Q. Understanding, I mean, all we can do in
9 statistics is what we can do here which is to show that
10 there is an extremely good fit between education and
11 voting in Mississippi. You would agree with that?

12 A. That I agree, that it's a -- it's a parameter
13 that helps fit the data -- the model to the data. So in
14 the statistical sense, when you look at it, if you look
15 at the partial R-squareds and look at the standardized
16 coefficients, which she did not report, then you can see
17 what the effects were. But she failed to report the
18 standardized coefficients.

19 Q. But you don't dispute that result that she
20 arrives at?

21 A. Not in that sense, no, I don't dispute it.

22 Q. And you don't dispute the ACS data which is
23 reflected in the chart here on page 9, educational
24 attainment by race in Mississippi showing a large gap in
25 attainment of bachelor's degree or higher?

1 A. That's correct. I don't dispute that.

2 Q. And you don't dispute Dr. Burch's conclusion
3 that: "While black and white people with similar
4 educational backgrounds vote similarly, people with
5 lower educational attainment vote at lower rates overall
6 than people with higher educational attainment"?

7 A. I don't dispute that.

8 Q. And you don't dispute her conclusion that:
9 "Black Mississippians are more likely to have lower
10 educational attainment and thus lower voter turnout than
11 white Mississippians"?

12 A. I don't dispute that.

13 Q. And --

14 MR. WALLACE: Objection to the form of
15 "thus," but otherwise he may answer.

16 Q. And we can go now to the ecological inference
17 analysis in Dr. Burch's report. I think it starts on
18 page 9, so we can just stay where we are for the moment.

19 Looking at page 9 of Dr. Burch's rebuttal
20 report, she explains that she conducted this ecological
21 inference analysis using of the voter file -- the
22 Mississippi voter file as a dataset to estimate voter
23 turnout by race; right?

24 A. That's what she says, yes.

25 Q. You don't disagree with that?

1 A. No.

2 Q. So this is not the CES, this is the actual
3 voter history of voters in Mississippi?

4 A. Yes.

5 Q. And she aggregated turnout data from the voter
6 file up to the block group level and then married the
7 block group level turnout data with block group level
8 racial demographic data on non Hispanic white
9 population, nonwhite population, and then ran the EI
10 analysis; right?

11 A. I think her definition of nonwhite included
12 Hispanics who were white among others and Indians. So
13 as she puts in her report, it's nonwhite, so it's not a
14 comparison between white and black. Is that correct?

15 Q. We can get into it, but yes, she runs the EI
16 between non Hispanic white and other groups --

17 A. Correct.

18 Q. -- as a binary; right? And she does that by
19 aggregating up the turnout data and the race data,
20 marrying them together into a dataset that can be used
21 for EI; right?

22 A. That's correct. And I -- again, I think under
23 the other or nonwhite category, however she described
24 it, she has, for example, people who might -- who say my
25 ethnicity is Hispanic but I'm white racially, and then

1 she includes every other race, whether they're Choctaw
2 or Chinese or Vietnamese, etcetera, in that group, yes.

3 Q. And by the way, just looking at page 11,
4 Footnote 31 -- do you see Footnote 31 there?

5 A. I do.

6 Q. -- Dr. Burch says: "Performing the analysis
7 with non Hispanic, black alone or a combination and
8 nonblack as reference categories also produces estimates
9 of lower black turnout relevant to nonblack residents
10 both statewide and in the central district." Do you see
11 that?

12 A. Yes, but it wasn't in her original report, was
13 it?

14 Q. I mean, it's in the surrebuttal report along
15 with the rest of her EI analysis; right?

16 A. But that's in the surrebuttal report, that's
17 not the report that I was commenting on. Did she have
18 it in her original report that I comment on, that's what
19 question I'm asking.

20 Q. She had it in the rebuttal report that you
21 commented on in your surrebuttal report --

22 A. Yeah.

23 Q. -- right?

24 A. Yeah.

25 Q. Okay. All right. And by the -- well, we'll

1 get back to it in one second. But going back to the EI
2 analysis. Looking at pages 10 to 11 of Dr. Burch's
3 rebuttal report, she finds a significant racial turnout
4 gap both statewide and in supreme court district 1. Do
5 you agree with that?

6 A. And that's where?

7 Q. Page 10, last paragraph: "The estimates
8 obtained using the ecological inference show that
9 there's a statistically significant racial gap in
10 turnout in Mississippi." Right?

11 A. And where's the results of the statistical
12 test?

13 Q. I don't -- I'm asking you if that's what she
14 found.

15 A. Well that's what she says, but where's the
16 result of the statistical test, is my question.

17 Q. Did you run a statistical test to confirm
18 whether those results are significant?

19 A. I didn't.

20 Q. Okay. You had no basis to dispute --

21 A. Well I can't answer whether or not -- what test
22 she did and how she ran it, so I don't -- I'm not in a
23 position to give an opinion on it right now.

24 Q. You don't give an opinion on it?

25 A. That's correct. I don't know whether or not

1 it's -- I can't agree with it, but I don't have an
2 opinion on it because I didn't run an independent
3 statistical test, and she doesn't show one here, she
4 just says she did.

5 Q. She reports that her statewide EI analysis
6 shows that the white turnout was 58 percent, nonwhite
7 turnout was 42 percent, 16 point gap?

8 A. She says that.

9 Q. And in the central district turnout -- black
10 turnout is 44 percent white turnout 62 percent?

11 A. She said that.

12 Q. And by the way, when she runs well -- strike
13 that.

14 And Dr. Burch says in the next sentence at
15 the top of the page 11: "The statewide and central
16 district estimates for each racial group produced using
17 EI and the CES are realistic given what we know about
18 the actual voter participation statewide in the central
19 district, in other words, they match up with the
20 benchmark reported by the secretary of state." Do you
21 dispute that?

22 A. Well, I didn't run an EI analysis myself to
23 look at what she did, so I'm not in a position to
24 dispute or not dispute it.

25 Q. You don't claim that Dr. Burch didn't

1 accurately report the results of her analysis?

2 A. No, I'm not claiming that.

3 Q. With respect to the EI analysis for district 1,
4 you say -- turning to paragraph 43 of your surrebuttal
5 report. You say: "Dr. Burch included Adams County
6 rather than Bolivar County in district 1"?

7 A. That's correct.

8 Q. Now assuming that's the case, do you have any
9 reason to think that the inclusion of Adams versus
10 Bolivar would have a material effect on the estimation
11 of turnout by race on a districtwide basis?

12 A. I don't know the answer to that until I've
13 looked at what the results would be.

14 Q. You didn't look at the results?

15 A. I didn't.

16 Q. Do you know the populations of those two
17 counties are nearly identical 28,000 versus 30,000?

18 A. No, I didn't.

19 Q. Did you know they're both black majority
20 counties?

21 A. No, I didn't.

22 Q. Would it stand to reason that in a district of
23 750,000 by voting age population including one
24 similarly-sized majority black county versus another is
25 not going to make a difference in terms of measuring the

1 districtwide turnout gap using EI?

2 A. No, I'm not going to agree to that because I
3 don't know what she did in the EI, and I don't know what
4 other factors may have come into play.

5 Q. But you didn't run an analysis yourself to
6 check?

7 A. Yes, I didn't.

8 Q. Have you received any further information about
9 whether or not Dr. Burch conducted -- looked at it with
10 Bolivar instead of Adams?

11 A. I think she did and sent it on to the
12 attorneys, but Mike and I haven't looked at it.

13 Q. Do you know what the overall result that she
14 obtained was?

15 A. No, I don't.

16 Q. If I told you the result was so similar that we
17 didn't have to change anything in the report, would you
18 dispute that?

19 A. No, I wouldn't dispute it other than the fact
20 that someone had the wrong county in there.

21 Q. Right. But you wouldn't dispute that the
22 results don't actually change if I represented that to
23 you?

24 A. No, I wouldn't.

25 Q. You also say that because Dr. Burch coded

1 racial demographic information as white and nonwhite,
2 more specifically not Hispanic white versus non -- non
3 Hispanic white, she is expressing an opinion about white
4 voters relative to nonwhite voters, not an opinion about
5 white voters relative to black voters?

6 A. Correct.

7 Q. All right. But you would agree that in
8 Mississippi, the vast majority of nonwhite voters are
9 black?

10 A. I would.

11 Q. You would agree that black and white
12 Mississippians together form 96.5 percent of the
13 population of Mississippi?

14 A. I'd have to look at it, but that sounds about
15 right to me.

16 Q. Do you contend that the existence of a small
17 number of nonwhite, nonblack Mississippians means that
18 it's not possible to draw inferences about black
19 Mississippians' voting behavior based on the actions of
20 nonwhite Mississippians?

21 A. The issue I have with it is more why not stay
22 with the black population? Why change the racial
23 definitions for this part of the analysis? That's the
24 problem I have with it.

25 Q. But given that 4 percent of the state's CVAP is

1 nonblack or nonwhite or thereabouts, doesn't matter if
2 the turnout in that group is 0 percent or 100 percent?

3 A. It's a question I can't answer without looking
4 at that data. It might be just as with the cases of
5 some of these observations that are in the CES file
6 where they have large weights, there could be effects
7 that are like that. So offhand, I'm not able to answer
8 that question without looking at the data.

9 Q. I mean, even if the turnout among that small
10 number of nonblack potential voters who are included in
11 the nonwhite category for purposes of the EI analysis
12 was 0 percent, the implied black turnout rate would go
13 up by 4 percent?

14 A. Again, it's a question that -- you can ask it
15 as many different ways as you can. My point goes back
16 to: Why didn't she look at black voters in the first
17 place? And to answer the question that you're trying to
18 ask me, it could be that among those 4 percent are cases
19 that are -- that are going to be significant as found in
20 the CES file. So I don't know, so I can't answer the
21 question.

22 Q. And again, this isn't a survey, this is based
23 on the voter file itself, that's the dataset here.

24 A. Yeah, and I'm not saying it's from a survey,
25 I'm saying again there's, you know, why switch the

1 definition? And I can't answer the question without
2 knowing more of it or if I started looking deeper in the
3 analysis, which I haven't done.

4 Q. And as we discussed, looking again at
5 Footnote 31 of Dr. Burch's report, she actually did look
6 at black versus nonblack turnout, and she found looking
7 again at that footnote that black turnout was estimated
8 to be
9 42 percent while nonblack turnout was estimated to be
10 57 percent. Any reason to dispute that?

11 A. Yeah, and then there's -- again, why is it
12 black versus nonblack, is the question. Why isn't it
13 black versus white?

14 Q. Right. So the question is: Do you dispute
15 that that's the result that she obtained?

16 A. I believe that -- I believe whatever the
17 results she's pointing at, I think she's doing as
18 accurately as she can. The issue is white versus black
19 and suddenly we're in white and nonwhite, and then we're
20 in black and nonblack.

21 Q. Well, having estimated black turnout at
22 42 percent and having estimated white turnout at
23 58 percent, can you not look at both the EI analysis and
24 then say she did look at white turnout and black
25 turnout?

1 A. My question is: Why didn't she do it? You
2 don't have to ask me that question, ask her why she
3 didn't stick with the same categories. I don't know the
4 answer to that.

5 Q. Right. And --

6 A. All I can say is that I'm looking at something
7 that says you're looking at these two categories and now
8 suddenly the categories are switched. So it's difficult
9 for me to answer those questions.

10 Q. Right. My question --

11 A. Regardless of what the numbers are or anything
12 else, it's why -- why change?

13 Q. Well, I mean, I understand. But my question
14 is: It seems like she did do that, that looking at the
15 data, she ran the analysis both white versus nonwhite
16 and black Versus nonblack, and so she does provide that
17 information that you're looking for in her report.

18 A. But it's not direct, it's not white versus
19 black. And that's a problem because that's what most of
20 her analysis and that's what it seems everything in this
21 is based on.

22 Q. Well, it's the same --

23 A. No matter how many times you ask me this,
24 that's going to be my same answer. I can tell you right
25 now.

1 Q. Well, why can you not look --

2 A. Because it's -- the problem is, why did someone
3 change the categories they're doing an analysis from
4 white to black to now it's nonblack and -- or nonwhite?
5 To me, I don't understand the reasons for the change.
6 And you have to wonder why it was done. And could the
7 categories in the definitions by race in the voter file
8 be different than they are elsewhere? Is that the
9 reason? I don't know. And it could be that -- you
10 know, it could be that there's lots of other issues
11 there, and I'm going on the voter file about race and
12 ethnic definitions that are not brought to the surface
13 here. I don't know the answer to that.

14 Q. Well again, the dataset for the EI analysis we
15 also discussed, the racial data comes from the census,
16 right, block group level census data on race; right?

17 A. Yes.

18 Q. That's the source of the data?

19 A. Yes.

20 Q. Okay. So let's --

21 A. But the source of the data is -- it's the
22 PL94171 data file.

23 Q. Yes.

24 A. Yes. Okay.

25 Q. So understanding that we're using census data,

1 that it's the same dataset --

2 A. I understand. But in looking at that, another
3 issue that comes into play that she doesn't mention is,
4 what's the effected differential privacy when you get
5 down to that smaller end, the differential privacy
6 protections that the census bureau has placed on small
7 area data, which I believe are even in the public 94 --
8 the PL94171 data.

9 Q. Do you have any reason to think that
10 differential privacy has an effect on the statewide or
11 central districtwide EI analysis of voter turnout by
12 race?

13 A. When you're aggregating up to smaller levels,
14 up to some point they might. The census bureau will
15 claim that's when you get to the state level or even
16 lower levels that the differences wash out, but I'm not
17 inclined to believe that that's necessarily the case,
18 and they certainly appear at smaller levels of
19 geography.

20 Q. This isn't something you mention in your
21 report?

22 A. No.

23 Q. Is it something you're just thinking about
24 right now?

25 A. It's -- it is something that I think can have

1 an effect on it when you start using different datasets
2 like that and go down to small areas, yes.

3 Q. And setting aside the punitive effect of
4 differential privacy, you would agree that using a
5 single dataset based on Mississippi voter data from the
6 secretary of state and race data from the U.S. census,
7 Dr. Burch measured using EI white turnout and black
8 turnout, and we can compare them?

9 A. I don't agree with that statement at all,
10 because I don't know what the definitions are in the
11 Mississippi voter dataset, how they might vary, what
12 kind of matches you get between the two. So the --
13 again, I can go back and answer you why switch from
14 white versus black to white, nonwhite and then black,
15 nonblack. I just don't understand the basis for that.

16 Q. What do you mean by definition in the
17 Mississippi voter data?

18 A. Whatever -- how are people defined? Is it self
19 reporting? When -- what are the definitions of race
20 that are in the Mississippi voter data file?

21 Q. The voter --

22 A. It's not in there, is it?

23 Q. I will tell you the voter data --

24 A. Yeah.

25 Q. -- In Mississippi does not --

1 A. Not in there.

2 Q. Which is why --

3 THE REPORTER: Gentleman, one at a time,
4 please.

5 A. That's the point I'm bringing up. So that's
6 not there. So what you're relying on -- totally on the
7 census bureau data for race.

8 Q. Right.

9 A. And again, if you've got the sentence data for
10 race, you've got black, you've got white, you've got all
11 the other race categories, why not use them?

12 Q. We talked about how you used an EI type
13 analysis in the early nineties; right?

14 A. That's current.

15 Q. You haven't run an EI analysis since then?

16 A. No.

17 Q. Do you have much familiarity with the type of
18 EI analysis that Dr. Burch ran in this case?

19 A. I can see Beijing type analysis. I looked
20 through what's on the websites and some of the
21 documentation for the -- both the hard version, the easy
22 version of Brinnon (phonetic), and that's what I know.
23 And for example, one of the points I made in my report
24 about it, she didn't report any priors on what the
25 distributions are and assumptions. And that's usually

1 common in a Beijing analysis.

2 Q. And --

3 A. But that still doesn't get to my question.
4 Why, if you've got the data for white and black and why
5 switch the racial categories? I don't understand why
6 she would do that.

7 Q. Are there reasons why if you're doing an
8 analysis like this, you would not want to include a
9 third group as a very small population?

10 A. I don't know the answer to that. I just -- my
11 question still is: Why not look at black versus white
12 if you've got the data for it?

13 Q. How would you go about looking at black versus
14 white?

15 A. Well, she had it. She's using the ACS;
16 correct? They use those same racial categories,
17 correct, in her EI analysis. That's in there; correct?
18 Where did she get the data for race if it's not from the
19 ACS?

20 Q. From the U.S. census, from the PL --

21 A. The PL9R, yeah. My mistake. So from that
22 dataset, they're in there too, white, black, any part
23 black, all those issues. So why switch?

24 Q. So you're suggesting that the EI analysis could
25 also have been run with many different racial categories

1 estimating the voter turnout not only of black voters
2 and white voters but also of American Indian voters and,
3 you know, Hispanic voters, understanding --

4 A. That's not what I'm suggesting. What I'm
5 suggesting is -- and I'm asking the question -- why
6 didn't she run that analysis? Why did she switch the
7 categories from what she did elsewhere in her report
8 where it's white and black? That's what's I don't
9 understand.

10 Q. Right. And I guess I'm asking: How would you
11 run an EI analysis on more than two variables --

12 A. It's not running more than two.

13 Q. -- reference categories?

14 A. How did she run it -- it's the same thing.
15 Here's white, nonwhite. She ran that; correct?

16 Q. Correct.

17 A. Why didn't she run white, black?

18 Q. Right. And I'm asking the questions, I'm not
19 going to answer them. But you don't -- you don't
20 know -- I think the answer is clearly you don't, but you
21 don't know of reasons why you would want to consolidate
22 voters into two reference groups in order to, for
23 example, not have part of your analysis be on very small
24 numbers of members of a particular racial group that's
25 not white and not black because the effects would be

1 less accurate?

2 A. I didn't say she needed to run it on, say, the
3 Cherokee population. I'm saying why didn't she just run
4 white versus black? She didn't do that. She ran white
5 versus, you know, non Hispanic white versus everybody
6 else.

7 Q. Do you know whether it's possible to do the
8 thing you're suggesting using EI analysis?

9 A. Why didn't she do it? That's a question I'm
10 asking. I can't answer that question. I don't know
11 what's possible in the EI analysis. My question is:
12 Why didn't she run white versus black? Because
13 everything in the reports up to this point are -- uses
14 those two categories. It's not nonwhite, did you report
15 to me something about, well, here's the nonwhite VAP in
16 a certain county, and they outnumber the white VAP. No.
17 It was all white versus black. So why is it suddenly
18 changing in the EI analysis to a new category of race?
19 That's my question.

20 Q. And Dr. Burch found that white turnout was 58
21 percent statewide and 62 percent in district 1?

22 A. Using the definition of white that she used in
23 the EI analysis?

24 Q. Non Hispanic white as defined by the census?

25 A. Yes.

1 Q. And she found that non Hispanic black alone or
2 in combination turnout was 42 percent statewide and
3 43 percent in district 1?

4 A. That's on -- where is that found again?

5 Q. Footnote 31.

6 A. That's what she says. But again, why didn't
7 she just put that in her report? And again, down here,
8 it says again it's -- it's black turnout is estimated
9 this while nonblack turnout was this. Why didn't she
10 have black versus white even in this footnote? That's
11 what I don't understand. She has white, nonwhite, and
12 then down here she has black, nonblack. And why the
13 switch? To me, that's mystifying.

14 Q. But you don't run an EI analysis, so you
15 wouldn't be able to say whether there's an
16 understandable reason to construct your analysis that
17 way?

18 A. Well, no matter what analysis, I would be
19 running ones I was familiar with or not. The question I
20 would ask is: Why did someone switch these categories
21 in this way? To me, that's -- it's not a good sign.
22 And whether or not it's -- it's okay that the numbers
23 are really small and everything turned out to be the
24 same; if that's the case, why not run it that way
25 instead of do this?

1 Q. It's not a good sign because you don't
2 understand why she did it?

3 A. Yes. She doesn't give any explanation. So
4 reading the reports that she does, white, black, white,
5 black, white, black. So when we get to this point, it's
6 white, nonwhite, and even down here in the footnote it's
7 black, nonblack.

8 Q. Because this is a different analysis, the EI
9 analysis?

10 A. I understand. But the whole function of the
11 report wasn't to suggest that it's black voters that are
12 turning out at a lower rate than white voters. Isn't
13 that the intent of the entire exercise here? I'm asking
14 you. So all of a sudden, we have black and nonblack and
15 then white and nonwhite.

16 Q. So it could be that she did it this way to
17 ensure the accuracy of her results?

18 A. But if that's the case, why would that be more
19 accurate than saying white and black and black and
20 white? I don't know the answer. I can't answer what
21 she did in the analysis. All I can do is read what she
22 said. And what she says is not consistent with things
23 she said elsewhere up to this point in the report she's
24 done.

25 Q. She constructed a different analysis

1 differently?

2 A. That's what it appears to be. That's my
3 question, is, you know, why? Doesn't seem to be the
4 topic.

5 Q. So just zooming out and talking about your
6 surrebuttal report, how much time did you spend putting
7 that surrebuttal report together?

8 A. It's quite a bit of time, especially starting
9 to look into the EI analysis which I was not familiar
10 with. So I spent a fair amount of time doing that
11 thinking I don't want to have to learn R to do this, you
12 know, it looks painful. I mean, I started down the path
13 to do it, but then when I started reading the report
14 again and said well, I see Dr. Burch now switched
15 categories, and I -- that to me is a problem right
16 there, I think I'll stop at that point.

17 Q. And how much time do you think it was total?

18 A. I'd have to look. It's a lot of hours.

19 Q. More than 40?

20 A. I don't know. Maybe. Again I'd have to look.
21 Once I send the hours in, I don't keep track of it.

22 Q. You sent them in?

23 A. I have them -- I've got them posted. If you
24 want to look at them, I've got an Excel spreadsheet.

25 Q. You kept records --

1 A. Yes.

2 Q. -- contemporaneous of your hours?

3 A. Oh, yes. Sure.

4 Q. Did you do any analyses that you left out of
5 your surrebuttal report? You mentioned a t-test.

6 A. No. Other than that I did subsequently, as I
7 said, I don't think so.

8 Q. You did the t-test subsequent to --

9 A. Well, when I was doing the original analysis, I
10 just didn't put it in the report.

11 Q. Okay. And you can provide that to us?

12 A. I can.

13 Q. And --

14 MR. WALLACE: We will take that under
15 consideration, and we'll let you know. You've also
16 asked for a piece paper from the other expert and we're
17 in the process, we'll get back to you soon.

18 MR. SAVITZKY: Thank you.

19 BY MR. SAVITZKY:

20 Q. And any -- other than that t-test, any other
21 analysis that you sort of ran but didn't include in the
22 report?

23 A. No.

24 Q. How about for your initial report?

25 MR. WALLACE: Same objection as to being out

1 of time. He may answer if he remembers.

2 A. I can't recall running different analysis that
3 are not in the report.

4 MR. SAVITZKY: Just one second. Can we take
5 three minutes, just go off. Thank you.

6 MR. WALLACE: Thank you.

7 (Short recess from 4:55 to 5:08 p.m.)

8 MR. SAVITZKY: Back on the record.

9 That concludes my questioning for
10 Dr. Swanson at this point, so --

11 MR. WALLACE: I have one statement I need to
12 make in response to your question about correcting
13 things at the front end, and if you want me to ask him
14 to swear to it, I will. He has not testified in court
15 in the voting rights case. That was his testimony. It
16 was true, but in an abundance of caution, he has given a
17 deposition in the voting rights case in Louisiana. And
18 I wanted to make sure you knew that -- I suspect you
19 already do, but I wanted to clarify it on the record.

20 MR. SAVITZKY: And just -- that's in the
21 Ardoin case?

22 MR. WALLACE: It is Ardoin, isn't it?

23 THE WITNESS: It is.

24 MR. SAVITZKY: Congressional redistricting
25 case?

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1 MR. WALLACE: Correct. That all I've got.
2 We will read and sign. And we'll respond to you once we
3 get it.

4 THE REPORTER: So you're ordering the
5 transcript?

6 MR. SAVITZKY: Yes, please.

7 THE REPORTER: And you want a copy,
8 Mr. Wallace?

9 MR. WALLACE: Oh, yes.

10 (Deposition concluded at 5:09 p.m.)

11 (Reading and signing was requested

12 pursuant to FRCP Rule 30(e).)

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C E R T I F I C A T E

STATE OF WASHINGTON

COUNTY OF WHATCOM

I, Evelyn M. Adrean, RPR, a Certified Shorthand Reporter in and for the State of Washington, do hereby certify that the foregoing transcript of the deposition of DAVID ARTHUR SWANSON, Ph.D., having been duly sworn on OCTOBER 5, 2023, is true and accurate to the best of my knowledge, skill, and ability. Reading and signing was requested pursuant to FRCP Rule 30(e).

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 20th day of October 2023.



EVELYN M. ADREAN, RPR, CCR-WA

